The highest appreciation rates occurred in the newer, more expensive districts of North Scottsdale and Paradise Valley and in retirement areas: East Mesa, Sun City and Sun City West. The lowest appreciation rates were measured in older and/or less expensive areas of Phoenix, including Maryvale, Christown and Metrocenter. In South Tempe and Glendale, the rates were anomalies, lower than expected in all price ranges and housing types, more from an infrequency of homes with high appreciation rates than from homes that depreciated in value.

TABLE 2
MEDIAN RATE OF METRO PHOENIX HOME APPRECIATION
By Geographic District, Per Quarter, Single Family Only

	Median Percent Change Per Quarter				
District	*1981-83*	*1984*	*1985r*	*1986*	*1981-86*
North Scottsdale	0.9	0.9	1.2	0.9	0.9H
South Scottsdale	0.7	0.7	0.6	0.6	0.6
Paradise Valley	1.3	1.0	0.9	0.7	0.9H
North Sunnyslope/Moon Valley	0.7	0.7	0.6	0.6	0.7L
Northwest Phoenix	0.9	0.8	0.6	0.6	0.6L
Metrocenter	0.4	0.6	0.6	0.4	0.5L
Sun City/Youngtown/Peoria	1.2	1.3	0.9	0.9	1.0H
Glendale	0.8	0.7	0.6	0.5	0.6L
Christown	0.5	0.5	0.5	0.5	0.5L
North Central Phoenix	0.6	1.0	1.1	0.7	0.8
East Camelback	0.6	1.0	0.9	0.7	0.8
East Central Phoenix	0.6	1.1	0.5	0.8	0.7
Mid-town Phoenix	0.5	0.8	1.1	0.8	0.8
West Central Phoenix	0.7	0.7	0.7	0.6	0.7
Maryvale	0.5	0.5	0.5	0.4	0.5L
Downtown/South Central Phoenix	0.0	1.0	0.2	0.7	0.5
South Phoenix	0.8	1.1	0.7	0.9	0.9H
North Tempe	0.7	0.2	0.7	0.8	0.7
South Tempe	0.7	0.5	0.7	0.6	0.6L
North Mesa	1.0	0.5	0.6	0.8	0.8
South Mesa	0.9	1.0	0.9	0.7	0.8H
East Mesa	1.2	0.9	0.9	0.9	0.9H
Chandler/Gilbert	0.9	0.9	1.1	0.9	0.9H
Western Suburbs	1.2	0.6	1.0	0.6	0.8
Deer Valley	1.0	0.7	0.6	0.6	0.6L
Sun City West/Rural Maricopa Co.	1.6	2.2	2.5	1.7	2.2H
TOTAL, METROPOLITAN PHOENIX	0.8	0.8	0.7	0.7	0.7

H The mean associated with this median is significantly higher than the mean for all of metropolitan Phoenix.

L The mean associated with this median is significantly lower than the mean for all of metropolitan Phoenix.

r Revised

Source: Center for Business Research, College of Business, Arizona State University. District designations are copyrighted by the Maricopa County Housing Study Committee.

TABLE 3
COMPARISON OF TOWNHOUSE/CONDOMINIUM TO SINGLE FAMILY HOME APPRECIATION
By Combined Geographic District, Per Quarter, 1981-86

	Median Percent Change Per Quarter	
District	*Single Family*	*Townhouse/Condominium*
North Scottsdale/Paradise Valley	0.9	0.6
South Scottsdale	0.6	0.2
North Central Phoenix	0.7	0.0
Northwest Phoenix	0.6	0.1
Sun City/Youngtown/Peoria	1.0	0.6
Glendale	0.6	0.2
West Phoenix	0.5	-0.2
East Central and South Phoenix	0.8	0.3
Tempe	0.7	0.2
Southeast Valley	0.9	0.4
West Valley	1.2	1.3
North Valley	0.6	0.3

Source: Center for Business Research, College of Business, Arizona State University

Between 1981 and 1986, the appreciation rate in most districts ranged from steady to declining modestly, similar to the slight deceleration measured Valleywide. In several districts, the rate was erratic from year to year, but this largely results from few homes reselling. The most significant trend occurred in Paradise Valley, where the rate slowed from the second-fastest in 1981-83 to the metro area median in 1986.

The small number of townhouses that sold more than once prevented using a detailed geographic division (see Table 3). Except in the West Valley, where townhouse sales occurred predominantly in Sun City West, the appreciation rate of townhouses was less than that of single family homes. The geographic pattern was similar for townhouses and single family homes.

OUTLOOK

After the aberrations of the 1970s, the residential housing market has returned to the stable conditions of preceding decades. The general inflation rate, housing affordability and supply-demand relationships remain relatively steady. Thus, continuing the pattern of the last few years, little change in the rate of appreciation for single family homes is likely during 1987. With the price of, and demand for, townhouses recovering somewhat in 1986 from the 1985 slump, their appreciation rate may accelerate slightly during 1987.

– Jay Q. Butler
– Tom R. Rex
Research Manager

Dr. Butler is Associate Professor of Real Estate and Director of the Arizona Real Estate Center in the ASU College of Business.

Complete Report Available

This article summarizes a more detailed report on the appreciation of homes in the Phoenix area during the 1980s. Copies of the complete report, which includes a number of tables with textual interpretation, may be obtained by calling or writing the Center for Business Research, College of Business, Arizona State University, Tempe, AZ 85287; (602) 965-3961.

"Home Sales," from page 1

MEDIAN SALES PRICE

The median price of all homes sold during 1986 was $78,000, 5.4 percent higher than in 1985. This rate of inflation exceeded that of 1983 and 1985, but the rate during 1984 was slightly greater.

Resale single family home prices accelerated 6.1 percent during 1986, nearly double the 1985 rate and the fastest pace of the 1980s. After adjusting for the size of homes sold, however, the median price per square foot advanced just 3.5 percent, only slightly faster than in earlier years of the 1980s. This rate merely offset 1985's small 2.2 percent gain.

New single family home prices rose 7.4 percent, a slower rate than in 1984 and 1985. Still, the median price neared $90,000, well above the median of the other categories (see Figure I).

Resale townhouse and condominium prices rebounded in 1986, rising 3.1 percent after a 1.6 percent decline in 1985. The 1986 increase was in line with those during 1983 and 1984. New townhouse and condominium prices climbed 6.3 percent in 1986. Annual gains in this category have been erratic.

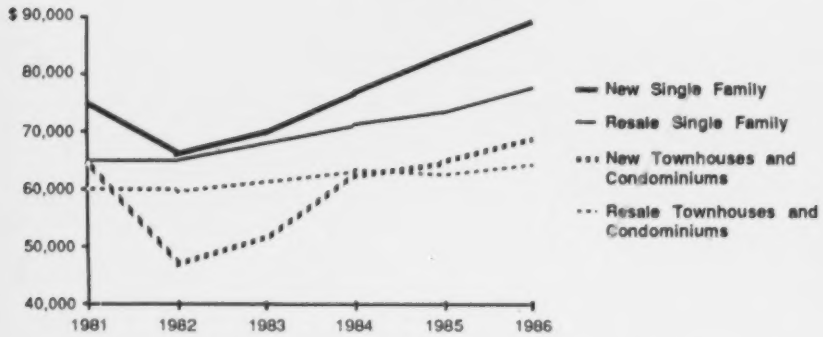
OUTLOOK

Housing price inflation has remained relatively stable and subdued throughout this economic cycle. For example, the rate for resale homes, after adjusting for size, has averaged approximately 3 percent. Because relative stability is likely during 1987 in the factors that affect home prices – supply of/demand for homes, underlying inflation rate, and affordability – a much different rate of increase in home prices is unlikely.

Except for the third quarter 1986 surge, the seasonally adjusted number of homes sold per quarter has barely increased since mid-1985. During 1987, sales probably will hold near this level, resulting in an annual sales level slightly below that of 1986.

– Tom R. Rex
Research Manager

FIGURE I
MEDIAN SALES PRICE



Source: Center for Business Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix

Reporting of Data

The data published in this article are derived from Maricopa County's legally recorded home sales. Since some sales are not recorded, the numbers slightly underestimate total sales.

Because the recording of a real estate transaction does not reveal whether the property is new, the Center uses a separate procedure to make this determination. However, the number of new homes sold is underestimated, and the number of existing homes sold is overestimated, both by the same undetermined amount.

TABLE 1
METROPOLITAN PHOENIX HOME SALES

	Single Family			Townhouse/Condominium			Grand
Fourth Quarter 1986	*Resale*	*New*	*Total*	*Resale*	*New*	*Total*	Total
Median sales price	$78,000	$91,900	$82,400	$63,475	$67,900	$65,000	$79,050
Percent change from:							
Third quarter 1986	-0.2	3.4	0.5	-2.3	-1.9	-2.6	-0.6
Fourth quarter 1985	5.8	5.8	5.8	1.6	1.3	0.9	4.7
Number of sales	10,513	2,507	13,020	1,999	697	2,696	15,716
Percent change from:							
Third quarter 1986	-18.8	-19.1	-18.9	-13.2	-29.0	-18.0	-18.7
Fourth quarter 1985	0.4	-7.5	-1.2	39.8	-6.7	23.8	2.3
Annual, 1986							
Median sales price	$78,000	89,375	80,500	64,400	69,125	65,900	78,000
Percent change from 1985	6.1	7.4	6.0	3.1	6.3	3.5	5.4
Number of sales	43,846	8,893	52,739	7,847	2,924	10,771	63,510
Percent change from 1985	13.6	-12.6	8.1	61.3	6.8	41.7	12.6

Source: Center for Business Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix.

Home Affordability Jumps During 1986

Affordability of Phoenix area homes continued to improve during fourth quarter 1986. The indexes climbed to the highest levels of the 1980s: 98 for new homes and 114 for resale homes (see Table 1 for definitions). A household earning the median income could afford an $89,800 home: more than the median-priced resale home, $79,000, but less than the median-priced new home, $91,900 (see Table 2).

During the fourth quarter, a sharp drop in the effective mortgage interest rate, to 10.1 percent, primarily accounted for the improved affordability. Resale home affordability surged more than new home affordability because the median resale home price declined slightly, while the median new home price rose. As a result of the changes in prices and mortgage rates, monthly housing payments went down more than 5 percent for resale homes and more than 2 percent for new homes. At the same time, household incomes increased.

Nationally, the fourth quarter situation was similar, with the affordability index rising to 94 for new homes and to 112 for resale homes. These values were slightly lower than the Phoenix area indexes. Incomes

TABLE 1
HOUSING AFFORDABILITY: DEFINITION OF TERMS

Term	Definition
Affordability index	Defined in terms of the median-income household. An index of 100 indicates that a median-income household is able to qualify for a median-priced home under the assumptions provided in this table. An index of 90, for example, suggests that such a household earns only 90 percent of the needed income.
Income	Median gross household income is estimated from median effective buying income (similar to disposable income), published in *Sales and Marketing Management.*
Income qualification factor	Federal National Mortgage Association (FNMA) guidelines state that "monthly housing expenses should not represent more than 25 to 28 percent of gross monthly income." The upper limit is used.
Interest rate	The effective interest rate on 30-year, fixed-rate, conventional mortgage loans for single family homes includes the contract interest rate plus fees and charges, or "points," amortized over a 10-year period; computed by the Federal Home Loan Bank Board.
Loan amount	A downpayment of 15 percent is assumed.
Median sales price	Single family homes only. Metropolitan Phoenix data from real estate recordings in Maricopa County. National resale home data from National Association of Realtors; national new home data from U.S. Bureau of the Census.
Monthly housing payment	As defined by FNMA, housing expenses comprise principal, interest, taxes and insurance. Data on taxes and insurance are not available; they are estimated at 15 percent of total housing expenses, using information supplied by the National Association of Home Builders.

Source: Center for Business Research, College of Business, Arizona State University

TABLE 2
HOUSING AFFORDABILITY INDEXES
Metropolitan Phoenix

			Resale Homes			New Homes		
Period	*Median Gross Monthly Income*	*Effective Interest Rate*	*Median Sales Price*	*Monthly Housing Payment*	*Affordability Index*	*Median Sales Price*	*Monthly Housing Payment*	*Affordability Index*
1981	$1,990	16.7%	$65,000	$910	61	$74,800	$1,050	53
1982	2,160	16.7	65,000	910	67	66,100	920	66
1983	2,270	13.7	68,000	790	80	70,050	820	78
1984	2,470	14.2	71,250	860	81	76,950	920	75
1985	2,640	12.9	73,500	810	92	83,200	910	81
1986	2,780	10.6	78,000	720	108	89,375	820	94
Quarter								
1st 1986	$2,730	11.0%	$75,000	$710	107	$88,200	$840	91
2nd 1986	2,760	10.7	77,150	720	108	87,950	820	95
3rd 1986	2,800	10.7	79,150	740	106	88,850	830	95
4th 1986	2,840	10.1	79,100	700	114	91,900	810	98

Source: Center for Business Research and Arizona Real Estate Center, College of Business, Arizona State University. Interest rates are from the Federal Home Loan Bank Board *News.*

were a bit higher nationally than locally, but home prices and interest rates were also greater. Throughout the 1980s, affordability usually has been slightly higher in the Phoenix area than nationally.

AFFORDABILITY DURING 1986

On average for the entire year, resale home affordability advanced 17 percent to an index value of 108. New home affordability increased almost as much, 6 percent, to an index of 94.

Incomes rose nearly as quickly as home prices during 1986, allowing the sharp drop in mortgage interest rates to be carried through to the monthly housing payment, which declined 9 percent for new homes and 11 percent for resale homes.

Between 1981 and 1986, the monthly payment fell approximately 22 percent for both new and resale homes. These declines are more impressive in comparison to 20 percent inflation in consumer prices in the Phoenix area and a nearly 40 percent increase in household incomes. As a consequence, affordability of both new and resale homes shot up 77 percent.

AFFORDABILITY UNDER DIFFERENT ASSUMPTIONS

Changing the assumptions used to calculate the affordability indexes can substantially affect their levels. For example, changing the income qualification factor from 28 percent, the upper end of the range set by FNMA, to 25 percent, the lower end of the range, would reduce the 1986 affordability indexes approximately 10 percentage points. Under this assumption, the median-income household could not afford the median-priced resale home.

Similarly, reducing the amount of the downpayment from 15 percent to 10 percent of the purchase price would lower the affordability indexes approximately five percentage points. However, paying 20 percent of the purchase price as a downpayment would raise the 1986 affordability indexes approximately six percentage points. Under this condition, the median-income household could afford the median-priced new home.

Shortening the term of the loan would reduce affordability, but not by an appreciable amount until the length drops to approximately 20 years. In contrast, lengthening the term past 30 years would have almost no impact on affordability.

Besides variations in financing conditions, affordability is highly sensitive to changes in market conditions. Had interest rates remained constant at the 1985 level during 1986, the affordability indexes would have slipped minimally from their 1985 values instead of climbing substantially. In contrast, had effective interest rates fallen further, to slightly less than 10 percent, the median-priced new home could have been purchased by the median-income household. Similarly, if home prices had not changed from their 1985 levels, 1986 affordability indexes would have been roughly eight percentage points higher.

AFFORDABILITY BY CITY

Housing affordability varies across the Valley. While mortgage interest rates are standard for the entire area, housing prices deviate widely. Even after adjusting for differing income levels, affordability is not constant among the largest cities.

For resale homes, affordability during 1986 was greatest in Glendale, Phoenix and Tempe, approximately 10 percent higher than the average for the metropolitan area (see Figure I). In Mesa, resale home affordability approximated the metro median, but Scottsdale's index was 18 percent less than the Valley's. The median sales price in Scottsdale, $118,000, was 51 percent higher than that for the Phoenix area, while the Scottsdale median income surpassed the Valley's by only 25 percent.

The variation in affordability is not as great for new homes. Glendale's new homes were the most affordable of the larger cities, with an index exceeding the metro median by 11 percent. The median-income household can afford the median-priced new home in Glendale. New home affordability is near the metro median in Mesa, Phoenix and Tempe but 12 percent less in Scottsdale.

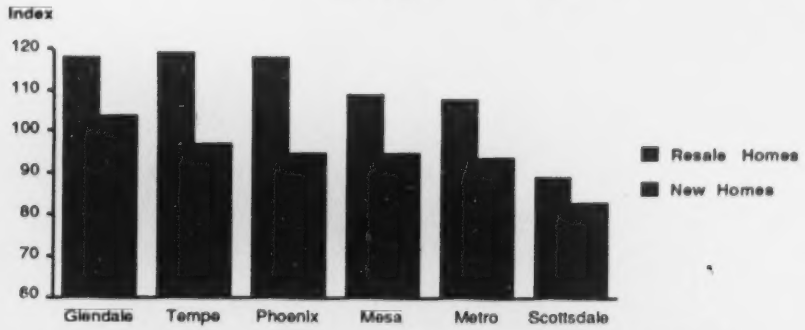
OUTLOOK

Affordability has improved substantially since 1984 mainly because of a sharp decline in mortgage interest rates. With prevailing contract rates near 9 percent and an expected inflation rate during 1987 of less than 4 percent, the spread between these measures remains historically wide. However, due to market expectations of a higher long-term inflation rate as well as other complications, such as the budget deficit, the historical 3 to 4 percentage-point spread is unlikely to return during 1987. Thus, mortgage rates may fall a little further, but their contribution to improved housing affordability will diminish this year.

The median household income probably will continue to rise at a pace slightly exceeding the inflation rate. Median home prices are likely to advance at near the current pace: resale home prices minimally less than incomes and new home prices marginally more. The result should be modest improvement in resale home affordability during 1987, with lesser gains in new home affordability.

– Tom R. Rex
Research Manager

FIGURE I
HOUSING AFFORDABILITY INDEX
By City, 1986



Source: Center for Business Research, College of Business, Arizona State University

GSP Records Healthy Third Quarter Gain

The Arizona Gross State Product expanded a strong 8.2 percent (inflation-adjusted and annualized) during third quarter 1986. Adjusted GSP, which excludes the volatile agriculture and mining industries, rose at a comparable pace of 7.9 percent (see Table 1).

Growth during the third quarter, more vigorous than during most of the prior two years, represented a rebound from the second quarter's subpar rate. The coincident index measured similar economic improvement (see page 11).

All sectors contributed to the third quarter gain, though the increases both in agriculture and in finance, insurance and real estate were minimal. The latter sector, as well as construction and trade, has experienced a marked slowing from the double-digit rates of 1985. As seen in Figure I, however, only trade's gross product rose less than 6 percent between third quarter 1985 and third quarter 1986. The gross product of most industries grew between 7 and 9 percent. Despite the large gain recorded by the mining industry, its gross product remained below the 1980-82 level.

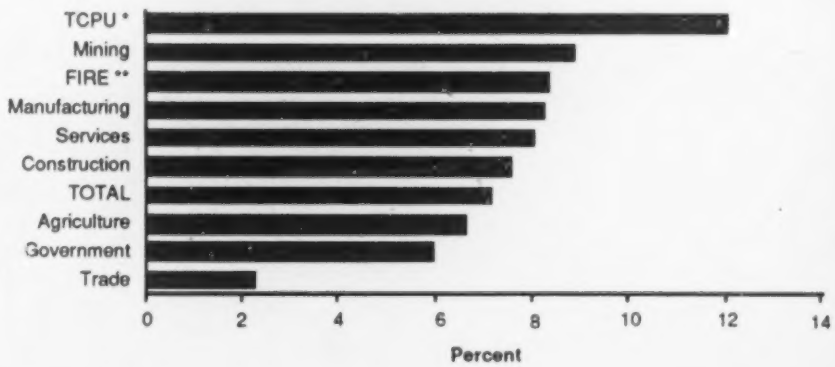
REVISIONS

In addition to routine data updating, an improvement was included in the latest GSP calculations. The updates – primarily revisions to annual GNP data, by sector – affected current and real dollar estimates for 1983 through 1986. The improvement – changing certain deflators used in calculating the GSP – affected only real GSP, which was revised back to 1970.

Through 1980, changes in the overall GSP deflator, on average, had been comparable to those in the GNP deflator. Between 1981 and 1985, however, the originally reported GSP deflator measured less inflation than the GNP deflator in each year (see Table 2). After the revision, the deflators again advanced similarly, except in 1981 and 1982. The variance in those years resulted primarily from the differing composition of the mining industry. In Arizona, mining is dominated by copper, the price of which fell sharply during 1981 and 1982. Nationally, oil and gas make up much of mining's gross product.

The results of these updates and improvements to GSP are illustrated

FIGURE I
ARIZONA GROSS STATE PRODUCT
Real Industrial Growth, Year Ending Third Quarter 1986



*Transportation, Communications and Public Utilities
**Finance, Insurance and Real Estate

Source: Center for Business Research, College of Business, Arizona State University; in cosponsorship with the ASU College of Business Dean's Council of 100.

TABLE 1
ECONOMIC GROWTH

	Arizona Gross State Product[r]				Gross National Product
Quarter	*Billions of Current Dollars, Annualized*	*Billions of 1982 Dollars, Annualized*	*Annualized Percent Change (1982 Dollars)*	*Annualized Percent Change (Adjusted GSP)**	*Annualized Percent Change (1982 Dollars)*
First 1985	46.821	42.516	17.5	15.8	3.0
Second 1985	47.218	42.450	-0.6	3.2	2.3
Third 1985	48.319	43.089	6.0	7.5	4.1
Fourth 1985	49.134	43.548	4.3	5.0	2.1
First 1986	51.022	45.099	14.2	10.4	3.7
Second 1986	51.372	45.250	1.3	4.4	0.6
Third 1986	52.716	46.176	8.2	7.9	2.8

*The adjusted GSP is the annualized GSP in billions of 1982 dollars, minus the contributions of the agriculture and mining industries.

[r]Revised

Source: Center for Business Research, College of Business, Arizona State University; in cosponsorship with the ASU College of Business Dean's Council of 100.

in Table 3. Revised real GSP growth is lower in each year of the 1980s. However, the quarterly pattern of growth, best seen in adjusted GSP, did not substantially change. After slowing during fourth quarter 1984, the Arizona economy has grown erratically.

OUTLOOK

Growth of the gross product during the fourth quarter probably was much slower than during the third quarter. Employment gains slowed, contributing to declines in the coincident index during October and November. This slowdown probably was temporary, however – a continuation of the erratic economic growth measured since late 1984. The Arizona leading index increased sharply during spring and summer 1986, suggesting faster economic expansion during first quarter 1987.

Adjusted GSP growth during 1986 probably averaged near 7 percent, down modestly from the 1985 rate of 8.3 percent. Further moderation is likely during 1987, but growth should at least match the 5.5 percent long-term average for the fifth consecutive year.

– Tom R. Rex
Research Manager

TABLE 2
EFFECT OF REVISION TO ARIZONA GSP DEFLATOR

	GSP Deflator		GNP
	Original[1]	*Revised*	Deflator
1980	9.3	9.7	9.1
1981	6.9	7.5	9.6
1982	3.2	4.7	6.4
1983	3.6	4.3	3.9
1984	2.4	3.5	3.8
1985	1.6	3.3	3.3

TABLE 3
EFFECT OF REVISION TO
ARIZONA GROSS STATE PRODUCT
Annualized Percent Change in Real GSP

	GSP		Adjusted GSP[2]	
Annual	*Original*[1]	*Revised*	*Original*[1]	*Revised*
1980	3.1	2.7	1.3	0.8
1981	6.0	5.4	3.3	3.0
1982	-1.7	-3.2	-0.5	-2.0
1983	6.4	5.7	8.8	7.9
1984	11.6	10.2	11.7	10.3
1985	8.5	7.3	9.7	8.3
Quarterly				
First 1984	13.3	12.6	10.5	9.5
Second 1984	5.0	3.7	10.5	9.1
Third 1984	13.7	11.7	12.4	10.7
Fourth 1984	3.0	1.4	3.6	1.9
First 1985	15.3	17.5	14.6	15.8
Second 1985	1.7	-0.6	5.7	3.2
Third 1985	7.4	6.0	8.7	7.5
Fourth 1985	9.6	4.3	10.7	5.0
First 1986	13.3	14.2	12.4	10.4
Second 1986	7.0	1.3	11.4	4.4

[1]As of November 1986

[2]Adjusted GSP excludes the contributions of the agriculture and mining industries.

Source (Tables 2 and 3): Center for Business Research, College of Business, Arizona State University; in cosponsorship with the ASU College of Business Dean's Council of 100.

'86 Inflation Sets Record Low at 1.3 Percent

The annual average increase during 1986 in the Metropolitan Phoenix Consumer Price Index moderated to just 1.3 percent, the lowest rate since the index began in 1975. The deceleration was sharper in the Phoenix area than nationally. Metropolitan Phoenix inflation dropped from a pace faster than the national average in 1984 and 1985 to a lower rate in 1986 (see Figure I).

Several methods may be used to calculate the inflation rate from the CPI. In this article, the annual average percent change is used: the average of the four quarterly index values for a year, compared to the average of the previous year. The other widely used method is employed in the quarterly CPI reports (see the February *Arizona Business*). It compares the index value at the end of the year to the value at the end of the previous year. Because the inflation rate was almost stable during 1986, the annual average increase nearly equaled the year-end inflation rate (1.1 percent).

CONSUMER PRICES IN 1986

The single greatest cause of lower inflation in 1986 was plunging gasoline prices. After a 3 percent increase during 1985, gas prices dropped 25 percent during 1986, reducing the CPI all-items rate by 1.5 percentage points. However, each major category registered lower inflation for 1986. Just as large gains in several subcategories pushed inflation to unexpected levels during 1984 and 1985, the complete absence of price shocks allowed inflation to slide to an unusually low plateau in 1986.

Food and Beverages

At 4.2 percent, this major category's inflation rate during 1986 was only minimally less than in 1985 (see Table 1). In most of its components, the 1986 inflation rate was comparable to that measured in 1984 and 1985.

Housing

The significance of this category in calculating the all-items index is

occurred in the transportation category, inflation in all major categories was less than expected. Most economic processes benefited from lower energy costs, with the savings passed along to consumers in smaller price increases.

Since the end of the 1981-82 recession, the temporal pattern of inflation (see Figure II) resembles that of a typical economic cycle. Yet no recession occurred during 1986 as suggested by the slowing inflation rate.

OUTLOOK

Inflation nationally is likely to accelerate moderately during 1987, into the 3-to-4 percent range experienced between 1983 and 1985. The consensus forecast of *Blue Chip Economic Indicators* calls for a 3.2 percent increase, with most panelists predicting a rate between 2.5 and 4 percent. No panelist foresees either deflation or much higher inflation. A similar acceleration is likely in the Phoenix area, to approximately 3.5 percent.

With 1986 year-end inflation rates near 1 percent, a 1987 annual average increase near 3.5 percent implies a 1987 year-end inflation rate exceeding 4 percent. Of the greater than three-percentage-point acceleration in the inflation rate expected between year-end 1986 and year-end 1987, more than one-half probably will be a direct result of the swing from falling to rising gasoline prices. In the Phoenix area, gasoline prices began to increase substantially in January.

– Tom R. Rex
Research Manager

CPI Description Available

A description of the Consumer Price Index is available on request from the Center for Business Research [call (602) 965-3961]. It answers common questions concerning the CPI; for example:

- What is the difference between the CPI for urban consumers (CPI-U) and the CPI for urban wage earners and clerical workers (CPI-W)?
- What is the relationship between the CPI and the inflation rate, and how is this rate calculated?
- Is the CPI a cost-of-living index?
- How is the CPI applied in contractual agreements?

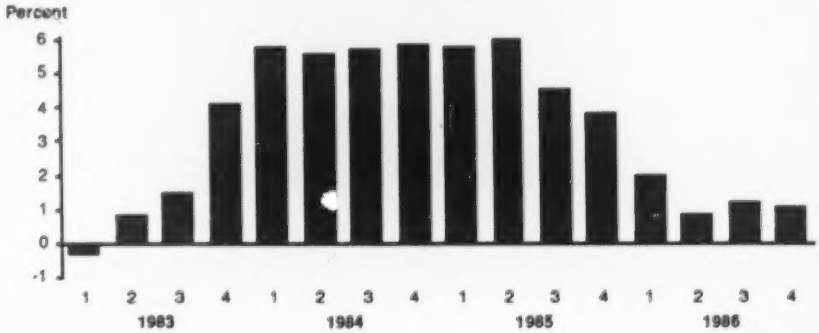
TABLE 2
METROPOLITAN PHOENIX CONSUMER PRICE INDEX
UNITED STATES AND COMPARATIVE METROPOLITAN AREAS
1986 Annual Average Percent Change

Expenditure Category	*Phoenix*	*United States*	*Denver**	*San Diego**
ALL ITEMS	1.3%	1.9%	1.0%	3.2%
Food and Beverages	4.2	3.2	1.0	4.2
Housing	2.2	2.9	1.6	5.5
Apparel and Upkeep	1.5	0.9	-0.2	0.4
Transportation	-5.6	-3.9	-3.9	-3.0
Medical Care	5.7	7.5	7.9	7.0
Entertainment	6.8	3.4	2.1	4.0
Other Goods and Services	4.6	6.1	7.0	3.8

*Estimated

Source: Metropolitan Phoenix data compiled by the Center for Business Research, College of Business, Arizona State University, in cosponsorship with Valley National Bank; other data are from the U.S. Department of Labor, Bureau of Labor Statistics.

FIGURE II
METROPOLITAN PHOENIX CONSUMER PRICE INDEX
YEAR-OVER-YEAR INFLATION RATE



Source: Center for Business Research, College of Business, Arizona State University, in cosponsorship with Valley National Bank.

CPI Revision Upcoming

Approximately once every decade, the U.S. Department of Labor issues a comprehensive revision to the methodology used to compute the Consumer Price Index. These updates and improvements do not affect any of the previously published index values. Further, the indexes generated with the new methodology are linked directly to the historical series so that no discontinuities exist.

Though improvements were incorporated into shelter category computations in 1983, the last major revision to the CPI occurred in 1978. Changes to be implemented in the January 1987 national CPI are not as substantial as those of nine years ago.

Since the Center for Business Research calculates the Metropolitan Phoenix Consumer Price Index using a methodology as similar as possible to that employed by the federal government, the 1987 revisions will be incorporated. The timing of this update to the Phoenix index cannot be predicted because it is necessary to wait for the U.S. Department of Labor to make available detailed information.

More information concerning the nature of the changes will be published when the new methodology is implemented.

Coincident Index Closely Follows Leading Index

Growth of the Arizona coincident index (introduced in the September/October 1986 *Arizona Business*, page 13) probably accelerated slightly during the winter from the fall's inconsistent, mediocre rate. The growth rate should quickly stabilize at this slightly faster pace.

These predictions are based on the performance of the Arizona Index of Leading Economic Indicators. Its changes normally lead those of the coincident index by approximately seven months, a relationship clearly illustrated in the accompanying figures.

Figures I and II track the entire history of the two indexes. Each was converted to a growth rate, eliminating the trend, and smoothed by dividing each 12-month moving average by the 12-month moving average of the period ending one year earlier. Except during the late 1970s, when the growth rate of the leading index gradually slowed while that of the coincident index flattened and then rose, the correspondence between the two measures has been close.

A variation of Figure II is presented in Figure III, in which each 12-month moving average is divided by the 12-month moving average ending just one month earlier. While the lines are more jagged, the same strong leading relationship is obvious. Figure III allows one to see shorter fluctuations in the indexes. For example, the latest acceleration, then stabilization, of the leading index's growth rate had not been matched by the coincident index through late 1986.

– Tom R. Rex
Research Manager

David L. Mix, a doctoral student in the College of Business, suggested use of the 12-month-moving-average rate of change to display the relationship between the leading and coincident indexes.

FIGURE I
GROWTH RATES OF ARIZONA COINCIDENT AND LEADING INDEXES, 1972-78
12-Month Moving Average Divided by 12-Month Moving Average of Period Ending 12 Months Earlier

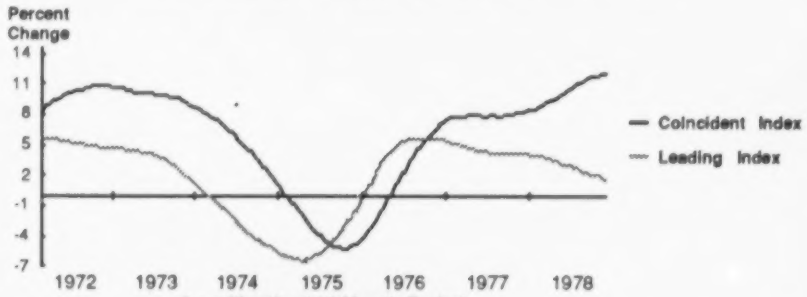


FIGURE II
GROWTH RATES OF ARIZONA COINCIDENT AND LEADING INDEXES, 1979-86
12-Month Moving Average Divided by 12-Month Moving Average of Period Ending 12 Months Earlier

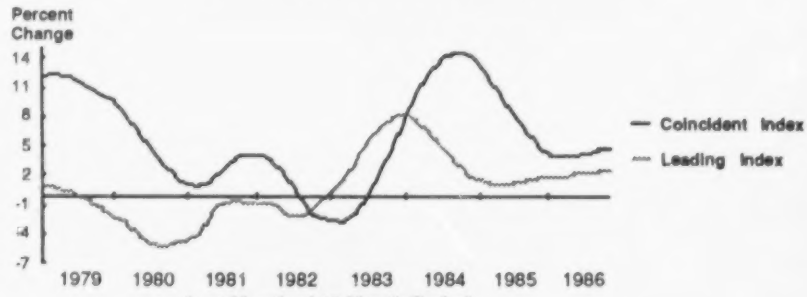
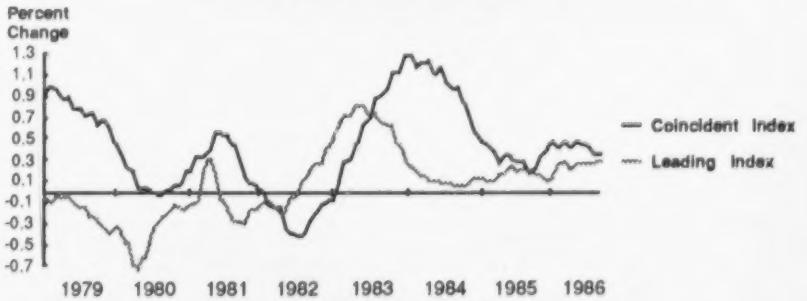


FIGURE III
GROWTH RATES OF ARIZONA COINCIDENT AND LEADING INDEXES, 1979-86
12-Month Moving Average Divided by 12-Month Moving Average of Period Ending One Month Earlier



Source (Figures I, II and III): Center for Business Research, College of Business, Arizona State University

Standard of Living Below Average Throughout Arizona

Arizona's standard of living – a comparison of the cost of living relative to wage/income levels – remains below the national average and other comparative norms. In the metropolitan areas, the cost of living is near expected levels, but incomes lag. In the non-metropolitan areas, living costs are higher, and incomes are lower, than in comparable areas nationwide.

This article updates information presented in the November 1985 *Arizona Business* and provides more detail on Arizona communities. First, a summary of national patterns in cost of living, income and standard of living is presented; conclusions are based on 1985 data and are similar to those previously reported.

TABLE 1
MEDIAN LIVING COST INDEXES
By Geographic Area, Population of Urbanized Area, and Income
(National Median = 100)

Area	Index
New England	105*
Middle Atlantic	101
South Atlantic	98
East South-Central	95*
West South-Central	100
East North-Central	98
West North-Central	95*
Mountain	100
Pacific	106*
Population	
Less than 25,000	97*
25,000-74,999	97*
75,000-124,999	98
125,000-199,999	98
200,000-399,999	98
400,000-999,999	101*
1 million or more	109*
Income	
Less than $20,500	96*
$20,500-$22,999	99
$23,000-$25,499	99
$25,500 or more	104*

*Statistically significant difference from the national average.

Source: Center for Business Research, College of Business, Arizona State University, based on 1980 Census population figures, 1985 *Sales and Marketing Management* household disposable income figures, and 1985 data of the American Chamber of Commerce Researchers Association (ACCRA).

COST OF LIVING

Living costs vary widely across the nation. The cost of living is highest along the East and West coasts and lowest in the Southeast and Northern Plains. In the Mountain region, which includes Arizona, the median cost of living matches the national median (see Table 1). These conclusions are based on information from a quarterly study conducted by the American Chamber of Commerce Researchers Association (ACCRA). Approximately 240 towns and cities nationwide participate in this study.

Cost of living correlates closely to the population of an area, with towns of less than 75,000 people enjoying significantly lower living costs and urban areas with more than 400,000 residents experiencing significantly higher costs than the national average. Living costs also correlate with area income levels.

INCOME LEVELS

Income levels vary geographically, but the pattern does not exactly match that of the cost of living. Significantly lower incomes are found in the Southeast, while the Great Lakes region enjoys significantly higher incomes (see Table 2). The median income in the Mountain region approximates the national average. These findings are based on the "effective buying income" – similar to household disposable income – reported in *Sales and Marketing Management* (1985 income figures are less than those previously reported for 1984 because of revisions in the calculations of these estimates).

Incomes correlate to population in nearly a straight-line relationship, with the lowest incomes in towns of fewer than 25,000 residents and the highest incomes in urban areas of more than one million people. Only the income of the largest population class is significantly different from the national average.

STANDARD OF LIVING

A measure of the standard of living can be derived by adjusting income levels for the cost of living: the simple division of an area's income by its cost of living index. The adjusted income figures should vary little by city size or by region if income

TABLE 2
MEDIAN HOUSEHOLD INCOME WITH AND WITHOUT COST-OF-LIVING ADJUSTMENT

Geographic Area	Income	Adjusted Income
New England	$26,700	$25,550
Middle Atlantic	23,800	23,400
South Atlantic	22,525	22,750
East South-Central	19,600*	20,300
West South-Central	21,650	21,750
East North-Central	24,300*	25,050*
West North-Central	22,275	23,625
Mountain	23,250	23,025
Pacific	24,150	21,475
Population of Urbanized Area		
Less than 25,000	$21,100	$22,075
25,000-74,999	21,150	21,850
75,000-124,999	22,050	22,600
125,000-199,999	23,750	23,750
200,000-399,999	24,175	24,100
400,000-999,999	24,075	23,375
1 million or more	26,150*	24,700
NATIONAL AVERAGE	$22,925	$22,975

*Statistically significant difference from the national average.

Source: Center for Business Research, College of Business, Arizona State University, based on 1985 *Sales and Marketing Management* household disposable income figures and 1985 ACCRA cost-of-living figures.

levels adequately compensate for differences in cost of living.

The adjustment does reduce the variation in income by city size. The median adjusted income is not significantly different from the national average in any city-size class, though the figures are lower in areas with a small population.

Significant regional differences, however, still remain in the adjusted income figures. The Southeast's adjusted income, while higher than the income figure, is significantly less than the national average. After adjustment, the Great Lakes region's income is even higher. Because of heavy out-migration of people from this region, a high standard of living may be a necessary labor market adjustment to retain and attract people.

ARIZONA

Compared to national averages, both the cost of living and median income in the Phoenix area are relatively high, resulting in a standard of living near average (see Table 3). Throughout the rest of Arizona, income levels are well below the norm and living costs are higher than average, resulting in adjusted incomes far below the national average. However, because of the strong correlation of each measure with geography and population size, comparisons to the national average can be misleading.

For example, when population size is taken into consideration, living costs in Arizona's metropolitan areas are slightly less than average, but incomes, even in the Phoenix area, are considerably less than average; hence, standards of living are subpar. Since the Mountain region is near the national average in prevailing income and cost-of-living levels, comparisons of Arizona cities to the Mountain region are not much different than those to the national average.

Compared to 13 ACCRA study participants classified as western metropolitan areas with populations between 400,000 and two million, Tucson's adjusted income, $19,795, ranks last. Phoenix's adjusted income, $22,525, ranked ninth; while below the average of this group of urban areas, it is comparable to the adjusted income of several areas, including San Diego. San Jose and Denver have the highest standards of living; other than Tucson, the lowest living standards are measured in Austin and Albuquerque.

In Arizona's non-metropolitan areas, income levels fall short of the national average for small towns. Yet the cost of living, especially in Page and Show Low, is higher than in small towns nationwide, probably because the long distances between small towns in Arizona raises the costs of transported goods. As a result, the standard of living in rural Arizona is approximately 20 percent lower than in the typical small American town. Compared to other small towns in the West, Arizona's rural areas have adjusted income levels less than most, though a few, such as Chico, California, have an equally low standard of living.

TABLE 3
COST OF LIVING, INCOME
AND STANDARD OF LIVING IN ARIZONA

	Cost of Living	Income	Standard of Living
	Compared to National Average		
Phoenix	+7%	+6%	-2%
Tucson	0	-13	-14
Yuma	+2	-22	-23
Casa Grande	+3	-21	-23
Page	+12	-12	-21
Show Low	+13	-16	-26
	Compared to Population-Size Class		
Phoenix	-2%	-9%	-7%
Tucson	-2	-17	-15
Yuma	+5	-18	-22
Casa Grande	+6	-14	-19
Page	+15	-4	-17
Show Low	+16	-9	-22
	Compared to Mountain Region		
Phoenix	+6%	+1%	-5%
Tucson	-1	-17	-17
Yuma	+1	-25	-26
Casa Grande	+2	-25	-26
Page	+11	-16	-24
Show Low	+12	-20	-29

Source: Center for Business Research, College of Business, Arizona State University, based on 1985 *Sales and Marketing Management* household income figures for counties and 1985 ACCRA cost-of-living figures for Phoenix, Tucson and Yuma. Cost of living data for Casa Grande, Page and Show Low were reported in November 1986 *Arizona Business*.

CONCLUSIONS

The cost of living is highest in New England and along the West Coast; it is lowest in the Southeast and the Northern Plains. In the Mountain region, it is near the national average. In addition to this geographic variation, living costs increase with population. In Arizona's metropolitan areas, living costs are near the level expected for their size and location in the Mountain region. In Arizona's small towns, living costs are roughly 5 to 15 percent higher than expected.

Incomes also increase with population. They are highest in the Great Lakes region and lowest in the Southeast. The Mountain region's median income is near the national norm. Throughout Arizona, however, income levels are approximately 5 to 15 percent less than in comparative areas.

While lowest in small towns, the standard of living does not vary significantly by population. It is highest in the Great Lakes region and lowest in the Southeast; the Mountain region's median living standard is close to the national standard. In Arizona, however, the standard of living is lower – approximately 7 percent lower for metropolitan Phoenix than the median for large urban areas. Throughout the rest of the state, living standards fall 15 to 25 percent short of those in comparable areas.

– Timothy D. Hogan
– Tom R. Rex
Research Manager

Dr. Hogan is Professor of Economics and Acting Director of the Center for Business Research at ASU.

January Purchasing Indicators Signal Upward Economic Growth

The beginnings of an upward tilt in the economic growth trend became evident in January, as both new orders received and production recorded good growth. Employment went up, reversing December's slight decline. Additions to inventory were made, while prices continued to increase only moderately. Thus, after losing a good bit of pep during the last half of 1986, the Arizona economy began its fifth year of expansion on a healthier note.

While price increases likely will step up during the first half of 1987, manufacturing is signaling that further rises will be needed to meet higher new order bookings and to bolster inventory levels that have not kept pace with economic growth. If the trade deficit continues to decline, aided by the falling dollar, and if consumer spending holds firm or increases, the next several months likely will bring additional upward movement in the economic growth curve.

Table 1 presents the results of the January survey of Arizona purchasing managers. Analysis of these results follows.

PRICES

Prices paid for purchased items increased in January at a rate consistent with the last six months of 1986. There is no sign that the relatively moderate inflation rate is beginning to heat up, which should facilitate a continuation of the economic expansion.

DELIVERY TIME

Delivery time on shipments from vendors recorded its smallest monthly gain since September 1985. Evidently, vendors are not experiencing bottlenecks in filling the orders they receive.

INVENTORY LEVELS

Inventory levels of purchased materials rose slightly, following December's level performance. After holding almost steady during all of 1986, inventories probably are barely adequate to support the current level of production. Any step-up in economic activity will trigger inventory building, which could add a multiplier to the expansion.

NEW ORDERS

New orders received by Arizona firms advanced at a strong pace in January, registering the greatest monthly jump since last April. This increase was more than twice as great as in the previous month and indicates the economy is growing at a faster rate as the new year begins.

PRODUCTION

Production grew in January, triggered by the new order surge, at a monthly increase rate more than twice that of December. This monthly gain was the largest since September.

EMPLOYMENT

Employment went up slightly in January, following two months of minor declines. Employment was spotty during the last half of 1986, but the January performance seems to indicate that it will pick up as needed to meet higher production rates.

PURCHASES

Purchases of materials and supplies also increased in January, at a faster rate than in December. This is a good sign of an expanding economy.

– Harold Fearon

Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.

Arizona Purchasing Survey

Now in its 24th year of monthly reporting, Dr. Harold Fearon's survey of Arizona business conditions utilizes data from a questionnaire sent to members of the purchasing management associations of Arizona and southern Arizona. It asks them to indicate the direction of activity - higher, unchanged, or lower - of seven key measures of economic activity in the month just ended. These purchasing managers deal daily with supply, demand, and price factors in the marketplace; their aggregate readings have accurately charted the state's economic course for two decades, providing timely data on turning points.

TABLE 1
JANUARY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (January compared to December)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	26	68	6
Delivery time from vendors	19	65	16
Purchased materials inventory level	31	43	26
New orders received	41	39	20
Production	33	50	17
Employment	19	66	15
Purchases	46	32	22

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

Arizona Leading Index Rises Modestly in December

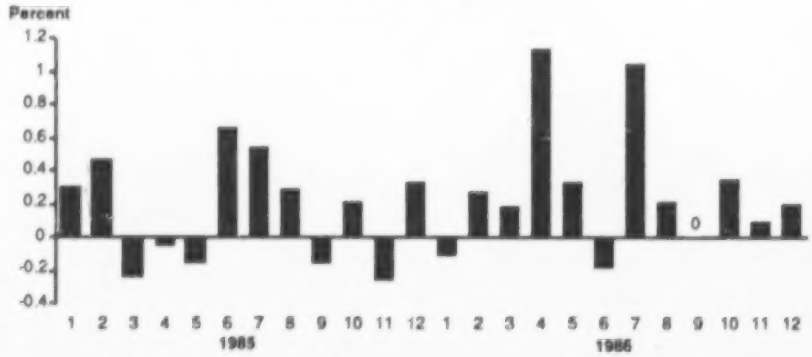
A 0.2 percent gain was measured during December in the Arizona Index of Leading Economic Indicators, the fifth consecutive increase between 0 and 0.3 percent (see Figure I). The index climbed to 110.3 from a revised 110.1 in November (1977 = 100).

For the second straight month, one-half of the index components went up (see Table 1). The national money supply (M2) led the advance for the ninth time during 1986. After inflation adjustment, M2 rose nearly 17 percent in 1986, more than in any year since 1972.

The change in sensitive materials prices contributed strongly to the index's growth for the third consecutive month. Residential building permits also rose, neutralizing the November decline.

While the inventory levels and new orders components increased in December, the other indicators derived from a survey of purchasing managers fell, nearly offsetting the gains. In addition, hours worked in the manufacturing industry decreased, and the number of first-time unemployment insurance claims jumped (a negative indicator).

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS
MONTHLY CHANGE



Source: Center for Business Research, College of Business, Arizona State University

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution+			
	Sept.	*Oct.*	*Nov.*	*Dec.*
Delivery Time*	-.02	.07	.03	-.05
Inventory Levels*	-.04	.06	-.14	.08
New Orders*	.09	-.05	-.17	.11
Production*	.00	.01	.03	-.04
Employment*	-.11	.07	-.01	-.08
Residential Building Permits	.16	-.32r	-.17r	.16
Unemployment Insurance Claims	-.12	-.05	.13	-.27
Average Workweek, Manufacturing	.00	.07	-.05r	-.11
Money Supply	.12	.34	.14r	.27
Change in Sensitive Materials Prices	.09	.16	.29r	.14
OVERALL INDEX	.00	.35r	.10r	.20

rRevised

+The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

*Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Center for Business Research, College of Business, Arizona State University.

1986 PERFORMANCE

Compared to the highly erratic behavior of 1984 and 1985, the index was relatively stable during 1986, with small gains recorded in eight months. The index climbed more during 1986 than during 1984 or 1985.

The improved performance resulted mostly from the extraordinary rise in money supply. Gains in sensitive materials prices and residential building permits added strength to the index, but the components derived from a survey of Arizona purchasing managers declined nearly as much as in 1984.

During the past three years, the money supply component alone pushed the index up. After falling in 1984, the net change in the other nine components was nil during 1985 and 1986. In contrast, growth was much better balanced during the long expansion of the late 1970s.

OUTLOOK

Since last summer, the leading index has indicated that the Arizona economy will grow at a stable pace during 1987. The chance of a recession beginning during the next several months is less than 3 percent.

In late 1986, the Arizona economy was weaker than at any time since the end of the 1982 recession, with employment declining between September and December. Three decreases in the leading index between September 1985 and January 1986 had indicated that strong economic growth was not likely during late 1986. Health should return to the Arizona economy by early 1987, based on strong gains in the leading index during spring and early summer 1986.

– Tom R. Rex
Research Manager

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT						
(In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	3rd Qtr.	52.716	2.6	9.1	NA	NA
Arizona - 1982 Dollars	3rd Qtr.	46.176	2.0	7.2	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	4th Qtr.	193.6	-0.1	1.1	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	Dec.	110.3	0.2	3.6	NA	NA
BUILDING PERMITS						
(Total Dollar Value in Thousands)						
Maricopa County	Nov.	238,096	-27	12	3,698,096	-1
Pima County	Nov.	49,991	-2	13	741,248	3
Balance of State	Nov.	48,586	-52	17	637,946	0
Arizona	Nov.	336,673	-30	13	5,077,290	0
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	Nov.	1,873	-34	-35	42,260	-16
Pima County	Nov.	684	-52	56	11,285	-2
Balance of State	Nov.	905	-7	-21	11,216	-28
Arizona	Nov.	3,462	-34	-22	64,761	-16
HOME SALES						
Maricopa County - Number	Dec.	6,569	43	20	63,510	12
Maricopa County - Median Price	Dec.	79,800	1.0	3.8	78,000	5.4
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	4th Qtr.	98	3.2	21.0	NA	NA
Metropolitan Phoenix - Resale Homes	4th Qtr.	114	7.5	23.9	NA	NA
MORTGAGE INTEREST RATES						
(Conventional, 30-year, Fixed-rate)						
Maricopa County	Jan.	9.1	-1.1	-15.7	NA	NA
POPULATION ESTIMATES						
(In Thousands)						
Maricopa County	4th Qtr.	1,942	1.0	4.5	NA	NA
Arizona	4th Qtr.	3,392	0.9	3.8	NA	NA
ELECTRICAL POWER SALES						
(In Millions of Kilowatt Hours)						
Arizona	Dec.	2,847	17.3	1.9	35,887	0.9

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University

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ARIZONA STATE UNIVERSITY ■ COLLEGE OF BUSINESS
CENTER FOR BUSINESS RESEARCH

Quarterly Economic Forecast Update

Arizona Economic Growth To Remain Modest in '87

The bewildering array of economic statistics and data revisions issued at the start of each year seems especially maze-like in 1987. Combined with tax reform and the maturity of the current expansion, they have induced a high level of uncertainty regarding the economic outlook for the nation and for Arizona. Nevertheless, the Economic Outlook Center in the ASU College of Business anticipates a continuation of Arizona's recent pattern of modest growth this year and expects further improvement in 1988.

The forecasts for Arizona and the Phoenix metropolitan area (see Tables 1 and 2) are based on a scenario for the national economy described in the forecast article below. Nationally, the Center envisions a period of slow growth for the months ahead. As the year progresses, U.S. industrial production is expected to surge in response to the dollar's declining exchange value. A cheaper dollar should allow American manufacturers to compete more effectively in world markets dominated by foreign competitors in recent years.

EMPLOYMENT

The outlook for Arizona also depends on a recovery by the manu-

See "AZ Forecast," page 2

In This Issue

6 '86 Forecast Review
7 '86 AZ Construction Report
12 '86 Valley Home Sales
13 '87 Real Estate Outlook
14 February Purchasing Survey
15 AZ Leading Index, January
16 AZ Economic Indicators

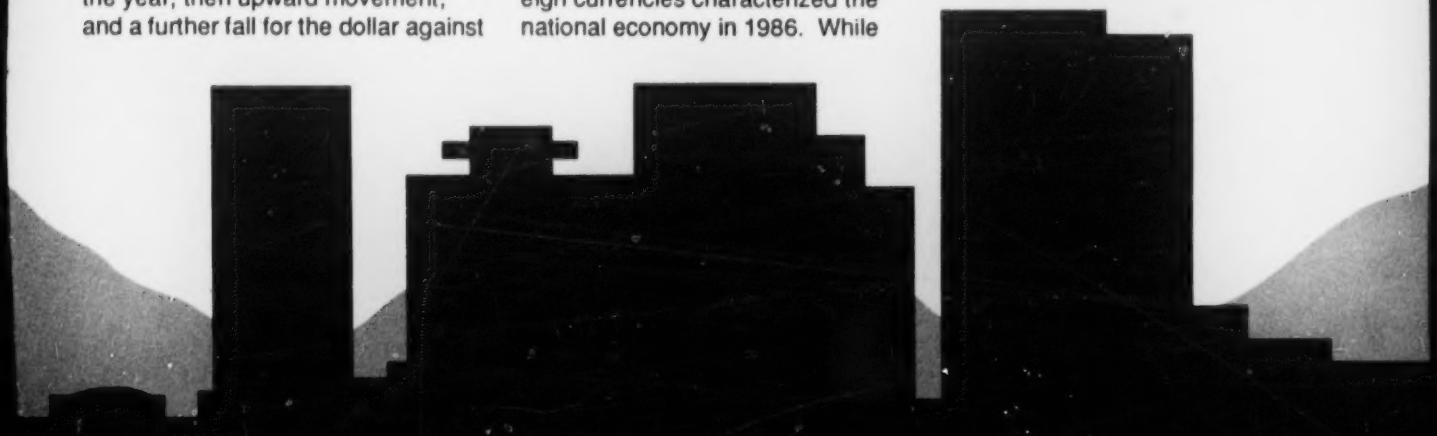
National Economic Forecast

Pattern of Moderate Growth To Repeat in '87

U.S. economic performance in 1987 should just match last year's growth rate of 2.5 percent, according to projections of the Economic Outlook Center in the ASU College of Business. The Center also forecasts a slight rise in oil prices during 1987; a continuation of inflation at manageable levels; an easing in interest rates through the first half of the year, then upward movement; and a further fall for the dollar against major foreign currencies. From the fourth quarter of this year into 1988, real growth should increase moderately, aided by a turnaround in foreign trade. For 1988 as a whole, real GNP should register growth of 3.3 percent (see Table 1).

A collapse in oil prices, reductions in inflation and interest rates, and a dollar plummeting against major foreign currencies characterized the national economy in 1986. While wage demands were kept in check, consumers fueled the economy by borrowing and spending. At year's end, consumer installment debt

See "U.S. Forecast," page 4



ARIZONA BUSINESS

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TABLE 1
1987 and 1988 ECONOMIC FORECASTS: ARIZONA

	Actual *1986*	Forecast *1987*	Forecast *1988*
Gross State Product			
Millions of 1982 Dollars	47,275	49,830	53,220
Percent Change	6.3[P]	5.4	6.8
Personal Income			
Millions of Current Dollars	44,200	47,471	51,600
Percent Change	8.4[P]	7.4	8.7
Retail Sales			
Millions of Current Dollars	17,187	18,300	19,690
Percent Change	6.3	6.5	7.6
Unemployment Rate			
Percent	6.9	7.6	7.3
Wage and Salary Employment			
Number in Thousands	1,341.4	1,400.8	1,474.1
Percent Change	4.9	4.4	5.2
Population			
Number in Thousands	3,332	3,452	3,572
Percent Change	4.1[P]	3.6	3.5
New Single Family Housing Units Permitted			
Number	34,079	32,000	32,600
Percent Change	2.4	-6.1	1.9
New Multifamily Housing Units Permitted[1]			
Number	27,008	17,600	15,800
Percent Change	-27.2	-34.8	-10.2

P = Projected

[1] Apartment complexes of three or more units

TABLE 2
1987 and 1988 ECONOMIC FORECASTS: MARICOPA COUNTY

	Actual *1986*	Forecast *1987*	Forecast *1988*
Consumer Price Index			
Percent Change	1.3	3.8	5.5
Retail Sales			
Millions of Current Dollars	11,372	12,135	13,100
Percent Change	5.0[P]	6.7	8.0
Unemployment Rate			
Percent	5.6	6.4	6.0
Wage and Salary Employment			
Number in Thousands	883.5	924.4	975.7
Percent Change	4.9	4.6	5.5
Population			
Number in Thousands	1,902	1,982	2,062
Percent Change	4.9[P]	4.2	4.0
New Single Family Housing Units Permitted			
Number	23,851	23,400	24,600
Percent Change	3.1	-1.9	5.1
New Multifamily Housing Units Permitted[1]			
Number	18,311	11,700	10,500
Percent Change	-32.9	-36.1	-10.3

P = Projected

[1] Apartment complexes of three or more units

Source (Tables 1 and 2): Economic Outlook Center, College of Business, Arizona State University

"AZ Forecast," from page 1

facturing sector. Revised statistics recently released by the Arizona Department of Economic Security indicate that manufacturing employment inched upward just 1.4 percent last year. Without the aggressive expansion of defense contractors, particularly in Maricopa County, manufacturing employment would have declined. By late 1986, even the state's aircraft and missile producers were in a holding pattern.

An improved international trade climate should allow Arizona manufacturing employment to rise 3.1 and 4.5 percent, respectively, in 1987 and 1988, with the durable goods category contributing most of the new jobs. This improvement is pivotal to the continued vigor of the regional economy. Construction, a prodigious producer of new jobs in recent years, and business and financial services are not expected to repeat the rapid growth in employment of the 1984-86 period.

Several factors are shaping the outlook for slower growth in the service-producing industries. Population gains, while still impressive, will not match the increases registered during the last two years. As a result, new jobs in personal services, real estate, retail trade and a variety of related categories may not be as plentiful as in recent times. Unexpected sluggishness in state revenue growth, combined with the uncertainties created by tax reform and the arrival of a new administration, promise to hold the growth of government employment below the rates recorded in 1985 and 1986.

The Center forecasts 4.4 percent growth in total wage and salary employment for 1987 and 5.2 percent for 1988, similar to the 4.9 percent gain observed last year (see Figure I for a breakout of the metropolitan and non-metropolitan areas). However, while the overall employment increase is expected to be comparable to gains of recent years, the composition may be different. At this stage of the economic cycle, the service-related sectors appear to be losing momentum. If the state's manufacturing firms rebound as anticipated this year, Arizona should continue to enjoy a period of relative prosperity.

Even if new jobs materialize as expected, however, the unemployment

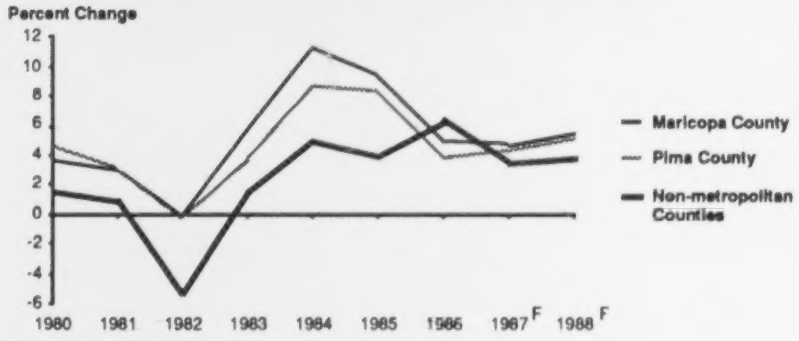
rate still may exceed the national average through 1988. The Center projects continued growth in the state's labor force but at a pace that would preclude a major reduction in the jobless rate during the forecast period.

PERSONAL INCOME

Employment data revisions sent analysts scrambling to adjust their estimates of 1986 personal income. The Bureau of Economic Analysis, producer of the statistics, has estimated Arizona personal income only through third quarter 1986. Wage and salary disbursements, which constitute about 60 percent of total personal income, depend directly on employment statistics. Employment growth in Arizona was slower than the original estimates suggested, and the inflation rate, another critical element in personal income projections, plummeted to slightly more than 1 percent in 1986. These factors partially explain the perplexing weakness in state tax collections during the second half of 1986.

The Center predicts that Arizona personal income will increase 7.4 percent in 1987 and 8.7 percent in 1988 (see Figure II). While these gains are similar to the estimated increase for last year, a few differences exist. The wage and salary component will be suppressed somewhat by a decline in construction employment and slower growth in hiring by defense contractors, diminishing the contribution of two relatively well-paying industries. Fiscal austerity at all levels of government will tend to keep the growth of transfer payments in check. As the state economy moves into 1988, accelerating inflation will raise nominal incomes in general and, in particular, proprietors' income and interest payments.

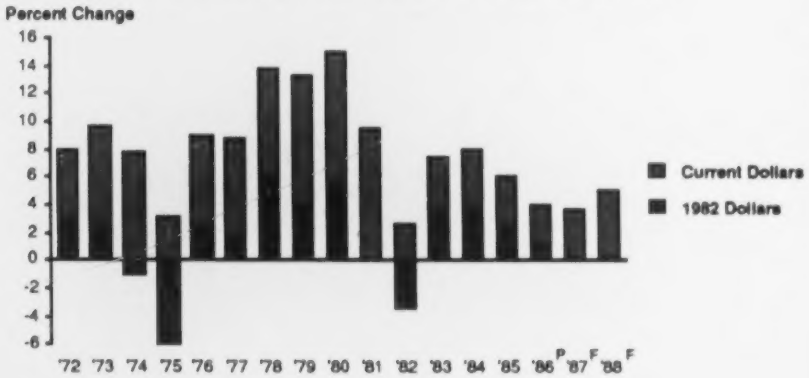
FIGURE I
ARIZONA EMPLOYMENT GROWTH, 1980-88
NON-AGRICULTURAL WAGE AND SALARY EMPLOYMENT



F Forecast

Source: Arizona Department of Economic Security; Economic Outlook Center, College of Business, Arizona State University

FIGURE II
ARIZONA PER CAPITA PERSONAL INCOME, 1972-88



P Projected
F Forecast

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Economic Outlook Center, College of Business, Arizona State University

INFLATION

It appears now that the plunge in the 1986 inflation rate was a temporary episode brought on by collapsing world oil prices. The United States Consumer Price Index for January 1987 soared at an 8.7 percent annual rate, the largest increase in five years, illustrating that fuel prices can induce wide swings in both directions. With oil prices predicted to remain relatively stable for the next two years, inflation is anticipated to return to the levels of the 1984-85 period.

The Center expects the Metropolitan Phoenix Consumer Price Index to rise 3.8 percent, on average, this year and approximately 5.5 percent in 1988. These rates are slightly higher than those projected for the nation as a whole, a phenomenon often observed in rapidly expanding urban areas and characteristic of the pattern for the Phoenix area during the last 10 years.

CONSTRUCTION

Construction activity in Arizona is expected to slow somewhat but to remain at high levels for the duration of the forecast period. The generally overbuilt multifamily housing segment probably will show the most weakness, falling 34 percent to less than 18,000 units permitted in 1987. Next year, a smaller drop is anticipated, to almost 16,000 units permitted.

Mortgage interest rates reminiscent of the 1970s should prevent a precipitous decline in single family housing construction during the forecast period. Although single family permits are expected to post a small loss this year, the predicted number of new units – almost 32,000 in 1987 and about 32,500 in 1988 – remains in a range comparable to building activity of the last two years.

It is difficult to predict, in light of the significant changes in federal tax laws, the course of commercial and

industrial construction in Arizona during1987. However, it looks as if major public works and road-building projects, especially in Maricopa County, will ensure brisk construction activity for years to come.

RISKS TO THE OUTLOOK

The accuracy of economic forecasts for the nation and for Arizona depends on the ability of American manufacturing firms, whether they produce lumber, computers, or automobiles, to grab a larger share of global markets than they have since 1984. Should the manufacturing sector fail to do so, a perceptible decline in economic growth will occur, perhaps resulting in a recession by 1989. Consequently, employment in Arizona's durable goods manufacturing sector will be a key indicator to watch in the months ahead. If the improvement in industrial production does not occur, it may be due to anemic economic growth in Japan, Europe and Latin America rather than to faltering competitiveness in the United States.

Another critical factor is the course that interest rates will follow during the next several months. If the fall of the dollar, perhaps in combination with higher inflation, were to make U.S. securities less attractive to foreign investors, interest rates would have to rise to attract the capital needed to finance the budget deficit. This sequence of events probably would curtail economic growth throughout the nation, most of all in expanding, capital-hungry states such as Arizona.

SUMMARY

Barring the developments outlined above, Arizona will continue to enjoy an enviable rate of economic growth in 1987 and 1988. Although the state's economy is unlikely to match the superlative performance of the mid-1980s, it is projected to expand much faster than the economies of the nation and most Western states.

– **Brian Cary**
Economist
Economic Outlook Center

New EOC Phone Number

With this issue of *Arizona Business*, the Economic Outlook Center (EOC) in the ASU College of Business has assumed authorship of the quarterly economic forecast articles. Questions related to the state and national economic outlooks should be directed to the EOC at its new phone number: (602) 965-5543.

TABLE 1
1987 and 1988 ECONOMIC FORECASTS: UNITED STATES
(Annual Average Percent Change)

	Actual	Forecast	
	1986	*1987*	*1988*
Real Gross National Product	2.5	2.5	3.3
OPEC Oil Price*	14.40	15.63	16.75
Consumer Price Index	1.9	3.2	4.1
Three-Month Treasury Bill Rate	6.0	5.5	6.7
U.S. Dollar vs. 10 Foreign Currencies	-21.6	-15.3	-10.8

*Dollars per barrel

Source: Economic Outlook Center, College of Business, Arizona State University

TABLE 2
CONTRIBUTIONS TO GROWTH IN REAL GNP
By Sector, 1986 – 1988
(Percentage Change from Prior Year)

	Actual	Forecast	
	1986	*1987*	*1988*
Real Gross National Product	2.5	2.5	3.3
Personal Consumption Expenditures	4.0	2.5	2.8
Gross Private Domestic Investment	1.9	0.6	6.8
Non-residential fixed	-1.4	-1.0	4.9
Residential fixed	9.4	3.7	2.8
Government Purchases of			
Goods and Services	3.7	2.5	0.1
Federal	3.0	1.8	-1.8
State and Local	4.3	3.1	1.7
Net Exports	-38.4	10.3	16.2
Exports	2.5	10.7	8.5
Imports	10.7	4.6	2.4

Source: Actual 1986 data are from the U.S. Department of Commerce, Bureau of Economic Analysis, Press Release BEA-87-02. Projections are by the Economic Outlook Center, College of Business, Arizona State University.

"U.S. Forecast," from page 1
amounted to 19 percent of disposable personal income. In addition to these influences, the phasing-in of tax reform and an improving real dollar net export balance should help push real GNP into positive growth for 1987 and 1988.

FORECAST BY SECTOR

Consumption

Table 2 shows the 1986-88 contributions to growth in real GNP of the final demand categories. During the second and third quarters of 1986, consumer spending on durable goods, such as autos and appliances, reached record-high levels. Reductions in oil prices and interest rates, in addition to the stimulus of auto incentive programs, helped produce the 4 percent growth in consumption spending for the year. The outlook for 1987 appears positive but more subdued. Moderate income growth and high levels of indebtedness suggest consumer retrenching and, therefore, a modest increase in spending. Growth in 1988 consumer spending should come in higher (2.8 percent) due to the stimulating influences of tax reform and higher personal income growth.

Investment

Several factors should slow the growth of non-residential fixed investment during 1987: the severe overhang of excess capacity in commercial property, tax reform's limitations on sheltering income through limited partnerships, and the lengthening of depreciation periods for investment properties. Residential fixed investment – in particular, single-family housing – is expected to grow 3.7 percent and keep investment from turning negative in 1987. Aided by single-digit interest rates, single-family housing should remain strong in 1988. Additionally, business spending on investment goods should rebound in 1988 due to a turnaround in the trade picture.

Public Sector

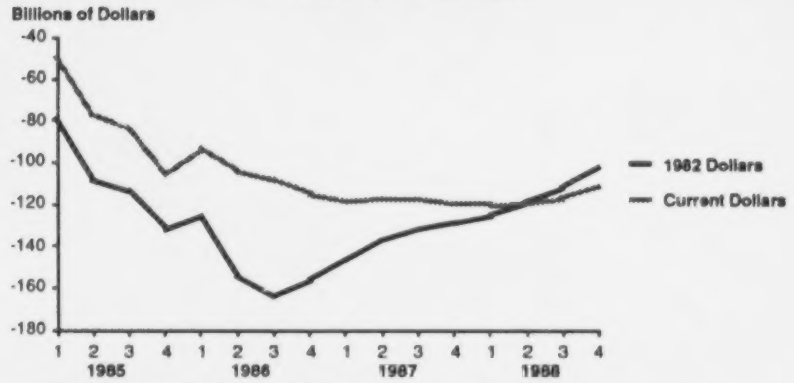
The specter, now declawed, of Gramm-Rudman-Hollings' deficit reduction targets, combined with generalized concern over the size of the federal deficit and its financing requirements, should result in little, if any, real growth in federal spending during 1987 and 1988. While defense spending will keep federal sector expenditures from turning negative in 1987, spending cutbacks in non-defense areas make for an overall picture of negative growth in 1988. If the administration's proposals for fiscal year 1988 come to fruition, in conformity with deficit reduction targets, the federal side of public spending will act as a brake on growth in real GNP.

For state and local governments, the spending picture does not offer much that will contribute to growth. Faced with the phase-out of revenue sharing and other federal funds, in addition to budget deficits triggered by slowing – even stagnating – economies, state and local governments are searching for alternative revenue sources just to maintain their existing level of services. While tax reform gives many states budgetary breathing room in 1987, the following year offers little in the way of relief. Overall, state and local spending should grow 3.1 and 1.7 percent, respectively, in 1987 and 1988.

Foreign Trade

The bright spot on the forecast horizon is the long-awaited turnaround in the trade picture, stimulated by the dollar's fall against major foreign currencies. With the dollar predicted to drop an additional 15 percent in 1987 and 11 percent in 1988, foreign producers will be hard-pressed to lower prices and take further cuts in profits. While the nominal export balance probably will continue to appear bleak in 1987 and 1988, real dollar trade should improve. Due to increased competitiveness with their foreign counterparts, U.S. producers will export a greater volume of goods and services. The nation's economy may finally be ascending the much heralded "J curve," which describes the behavior of the net export balance in light of currency devaluations (see Figure I). While imports probably will show modest growth in 1987 and 1988, real exports should increase 11 and 9 percent, respectively, in those years. On balance, net exports will exert less drag on U.S. growth performance.

FIGURE I
NET EXPORT BALANCES



Source: Economic Outlook Center, College of Business, Arizona State University

MAJOR FORECAST RISKS

A major risk to this scenario of national economic growth is that improvement in the real trade balance may not materialize. U.S. producers, faced with reduced foreign competition, may perceive the turnaround as a chance to increase profits through higher prices. The effect would be short-lived since foreign producers would view this development as an opportunity to continue making inroads into U.S. markets. Additionally, the trade picture could deteriorate if the democratically-controlled Congress caves in to pressures for protectionist legislation. This shift in trade policy would do little to improve the export climate since foreign countries would be quick to retaliate by erecting barriers to entry against U.S. exports.

Another risk to the Center's forecast concerns the extent of the dollar's decline in relation to the willingness of foreign investors to finance the U.S. federal deficit through their purchase of government bonds. Foreign investors view U.S. government-issued bonds as a safe investment from the standpoint of political stability but also as one that carries exchange-rate risk. The decline in the dollar's value vis-a-vis other currencies is associated with a demand by foreign investors for higher interest rates to hold existing debt as well as to acquire newly-issued U.S. securities. Should the dollar decline precipitously in the immediate future, U.S. interest rates could rise enough to severely curtail U.S. growth.

A final risk to growth is tied to the price of oil and its link with inflation. If OPEC finds the discipline to enforce production quotas that significantly drive up the price of oil, world inflation would be reignited. For the United States, this development would trigger a shift in the Federal Reserve's policy from accommodating growth to favoring tighter money. The latter would bring higher interest rates and low (to zero) growth in real GNP.

– **Jim Huyghebaert**
Senior Economist
Economic Outlook Center

Arizona Economic Growth Near Predictions in '86

Throughout 1985 and 1986, the Center for Business Research, in its quarterly economic forecasts, predicted that the Arizona economy would expand at a moderately rapid rate in 1986, though more slowly than during 1985. Warnings were repeated that growth would be erratic temporally as well as by industry.

These projections generally were on target, making the Center one of the most accurate panelists contributing to the *Arizona Blue Chip* economic forecast. However, the Center, like all forecasters, badly overestimated the rate of inflation during 1986, and its real estate outlook was too pessimistic. Tables 1 and 2 compare actual 1986 results to the Center's forecasts issued between June 1985 and June 1986.

TABLE 1
ECONOMIC FORECAST ACCURACY
Arizona, 1986

		Date of Forecast			
	Actual	*6/1/85*	*12/1/85*	*3/1/86*	*6/1/86*
Gross State Product					
Real Percent Change	6.3P	6.4	6.0	6.2	5.9
Personal Income					
Current Percent Change	8.4P	9.4	9.4	9.3	7.9
Retail Sales					
Current Percent Change	6.3	9.0	8.5	8.5	7.9
Unemployment Rate					
Percent	6.9	6.5	6.9	6.5	6.5
Wage and Salary Employment					
Percent Change	4.9	4.8	5.5	5.5	5.2
Population					
Percent Change	4.1P	3.6	3.8	4.2	4.2
New Single Family Housing					
Number of Units Permitted	34,079	29,000	32,000	32,000	33,150
New Multifamily Housing					
Number of Units Permitted	27,008	15,000	20,000	24,000	24,300
Value of Building Permits					
Current Dollars (in millions)	5,410	4,000	5,000	4,650	5,075

P = Projected

TABLE 2
ECONOMIC FORECAST ACCURACY
Maricopa County, 1986

		Date of Forecast			
	Actual	*6/1/85*	*12/1/85*	*3/1/86*	*6/1/86*
Consumer Price Index					
Percent Change	1.3	6.2	5.4	4.7	2.0
Retail Sales					
Current Percent Change	5.0P	9.5	9.3	9.4	7.6
Unemployment Rate					
Percent	5.6	5.3	5.4	5.2	5.1
Wage and Salary Employment					
Percent Change	4.9	5.5	5.9	5.9	5.2
Population					
Percent Change	4.9P	3.9	4.1	4.6	4.6
New Single Family Housing					
Number of Units Permitted	23,851	20,000	22,000	22,000	22,550
New Multifamily Housing					
Number of Units Permitted	18,311	10,000	14,000	17,000	17,500
Value of Building Permits					
Current Dollars (in millions)	3,915	2,900	3,575	3,450	3,650

P = Projected

Source (Tables 1 and 2): Center for Business Research, College of Business, Arizona State University

GSP AND PERSONAL INCOME

Based on three quarters of actual data, the latest projection of inflation-adjusted growth in Arizona Gross State Product is quite near each of the forecasts. Unadjusted personal income predictions originally were too high because of the unexpected deceleration in inflation. The GNP implicit price deflator, used to adjust personal income, rose just 2.6 percent during 1986, approximately one percentage point less than forecast.

INFLATION AND RETAIL SALES

At the consumer level, the differences between actual inflation and the forecasts were even greater. Direct and indirect effects of falling energy prices primarily accounted for the lower rate. As a result, unadjusted retail sales forecasts of nearly all prognosticators were too high, a factor contributing to the state's budget deficit. After adjusting for inflation, the Center's forecasts for Arizona retail sales were close to the actual results, but retail sales in Maricopa County still were weaker than anticipated.

EMPLOYMENT AND POPULATION

Predictions on job creation and the unemployment rate were near the actual values. Except for the Center's early 1985 forecasts, projections on population growth also were quite accurate.

REAL ESTATE

For the second consecutive year, the Center's projections on construction activity were too conservative. The reasons are the same as in 1985. First, interest rates declined more than expected throughout the year, boosting single family construction more than 4,000 units higher than the earliest forecasts for 1986. Second, commercial construction, particularly of office buildings and apartments, did not decline as much as expected. Further, retail and hotel construction soared to record levels. High vacancy rates did not slow new construction as rapidly as predicted, though by the second half of 1986, apartment construction had declined sharply.

– **Tom R. Rex**
Research Manager

Residential Overtakes Commercial/Industrial To Drive Record Growth

After three consecutive years of record growth, the dollar value of Arizona construction activity remained virtually unchanged from the 1985 level, at $5.4 billion in 1986. Permit activity, however, declined slightly from 108,897 to 104,625 permits. In previous years, the commercial and industrial sectors were the forces driving construction industry growth. For 1986, these sectors posted declines, while the residential and "other" sectors recorded improvements over 1985.

Although total construction activity in Maricopa County declined from $4.0 billion to $3.9 billion, the metropolitan Phoenix area again predominated development, recording 72 percent of the state's total dollar value. With a 9 percent increase ($747 million to $817 million), Pima County continued to represent about 15 percent of the permitted activity. While the remaining 13 counties accounted for only 13 percent of total Arizona construction, activity improved significantly over last year in several counties, including Coconino and Mohave. Table 1 presents the leading areas of development activity for 1986.

SECTORAL ACTIVITY

Residential

Maricopa County. Mortgage interest rates continued to decline during 1986. For example, the average rate during 1986 for a 30-year conventional mortgage was 10 percent, in contrast to 12 percent for 1985. Like in 1985, declining interest rates provided little stimulation for the housing market. The single family sector grew only 3 percent. Although this sector may not be fulfilling expectations, it has recorded its fifth consecutive year of growth and its best year since the record 30,479 permits issued in 1978.

TABLE 1
REPORTING UNITS WITH GREATEST TOTAL VALUE OF BUILDING PERMITS
1986

Reporting Unit	Value (in millions)
Phoenix	$1,282
Mesa	585
Scottsdale	544
Tucson	407
Unincorporated Pima County	393
Unincorporated Maricopa County	337
Chandler	296
Tempe	295
Glendale	273
Peoria	123
Gilbert	118
Unincorporated Yavapai County	97

Source: Center for Business Research, College of Business, Arizona State University

Several factors may have contributed to the slow growth of the single family sector. First, the resale market increased significantly in 1986. Homebuyers appear to have turned to this market for more affordable homes (median price of $78,000) in well established neighborhoods. In addition, consumers still have high debt loads and need fairly low rates to induce them to further increase their debt. Finally, housing appreciation has not been strong enough to stimulate home purchasing.

Although permit activity remained fairly stable, total dollar value moved from $1.6 billion to $1.7 billion. Further, the median price of a new home increased from $83,200 to $89,375. Some of the price increase can be attributed to the continued growth of the move-up market. In 1986, 72 percent of new homes sold for more than $80,000, compared to 56 percent during 1985. With improved affordability in the detached single family home market, the townhouse/condominium market continued to be adversely affected, with only 2,928 sales (median value of $69,125).

Another factor affecting the new home market is that households have turned to remodeling, rather than purchasing a new home. Remodeling activity continued to improve during 1986.

Rest of Arizona. The single family sector in Pima County grew 8 percent during 1986. As in Maricopa County, total dollar value increased over 1985, which shows continued strengthening of the move-up market. As in 1985, 72 percent of the permitted homes were to be built in the unincorporated areas, while another 24 percent were recorded in Tucson.

In contrast to the metropolitan counties, single family permit activity decreased in the remaining counties. However, the mobile home sector continued to be an important element of the housing market (see Table 3).

Commercial

Maricopa County. While the retail and the hotel/motel sectors set new records in 1986, the office and multifamily sectors posted significant declines. This pattern of activity yielded a 10 percent drop in dollar value from the 1985 level and a 5 percent decrease in permits issued.

For the first time in three years, building activity in the single family sector exceeded that in the multifamily sector. Even with declining activity, the metropolitan vacancy rate for 1986 was 11 percent, in contrast to 10 percent in 1985.

In response to the much publicized concern about the office building market, development activity declined in 1986. In contrast, the retail sector established a new record, with permits issued primarily for strip and neighborhood centers.

The greatest increase in 1986 commercial construction activity was in the hotel/motel sector. This development represents a jump of more than 5,000 rooms, in comparison to a more modest gain of 2,300 rooms in 1985.

Rest of Arizona. Commercial development remained very stable in Pima County. Unlike in Maricopa County, multifamily activity increased, advancing 16 percent and again exceeding activity in the single family sector. Table 2 shows new office building activity declined in 1986, but the retail sector continued to improve. The hotel/motel sector rebounded.

Multifamily sector activity decreased sharply in the non-metropolitan counties. The decline in development activity was most evident in Sierra Vista, Flagstaff, and Casa Grande. For the last few years, the office building sector has remained consistent. The retail sector posted a correction from its 1985 decrease, improving strongly in 1986. The hotel/motel sector declined.

Industrial

Maricopa County. In 1985, the recorded level of construction activity was largely driven by a few large-

scale, single-user projects. With a total absence of such projects in 1986, the value of industrial sector building permits dropped. This pattern was especially evident in Chandler and Mesa.

Rest of Arizona. A similar pattern was evident throughout the state, with industrial activity falling in Pima County. After several years of strong activity, no industrial permits were issued in Casa Grande. The highest level of activity was recorded in Flagstaff.

Other

This category includes a wide range of permitted activity, from churches to schools to swimming pools. In Maricopa County, dollar value increased 17 percent in 1986, while permit activity declined 1 percent. Primary areas of activity were health care facilities, religious buildings, and public buildings. The construction of public educational facilities has continually increased since 1984.

Led by permits for educational facilities, this sector in Pima County reported a 50 percent jump in dollar value, while the number of permits declined 2 percent. The non-metropolitan counties followed a similar pattern. Areas of activity included Eagar, Flagstaff, Apache Junction, and unincorporated Yuma County.

LOOKING AHEAD

At the beginning of 1986, most forecasts were for a good year based on stability. The year ended with results that were fairly close to most expectations. While total construction activity was very consistent, the emphasis changed over the year from commercial to residential development.

Since the Arizona economy should continue to expand during 1987, the Arizona Real Estate Center (AREC) expects construction activity to slow just 2 percent, from $5.4 billion to $5.3 billion. In Maricopa County, total construction activity probably will decline from $3.9 billion to $3.5 billion, but the level of activity will vary by sector. Despite these projected declines, 1987 should be the construction industry's fifth consecutive year of solid activity.

Even with stable interest rates, AREC expects the single family market to maintain an activity level comparable to the last few years. For 1987, 32,000 homes should be permitted in Arizona, with 23,400 of them in Maricopa County. The ongoing strength of the single family market should cause the multifamily sector to continue its decline, to 17,600 units (11,700 units in Maricopa County). Even though it represents a significant decline from the last few years, the projected level of activity is solid, on historical grounds, and can reasonably be absorbed by the market.

In the commercial sector, all segments are expected to decline. Within Maricopa County, several large office building projects are expected to commence in 1987, so this sector could remain fairly consistent. Much like the office building market of 1986, concern is increasing about the continued strength and depth of the retail and hotel/motel sectors. Hence, both are expected to decline during 1987, with the greatest decrease occurring in the hotel/motel sector.

Because of rapid population growth, especially in Maricopa County, public projects are expected to continue as an important area of construction activity. In fact, road building, which is not a permitted activity, promises to be a major source of construction activity and employment.

Since construction activity tends to be strongest while a positive economic climate prevails, the expected moderate economic growth implies limited building. This moderate growth, coupled with the rapid expansion of certain construction sectors, establishes complex relationships that make it difficult to project construction activity. However, the consensus is for a decline during 1987, with potential for a moderate upturn in 1988.

– Jay Q. Butler

Dr. Butler is Associate Professor of Real Estate and Director of the Arizona Real Estate Center in the ASU College of Business.

New AREC Phone Number

Questions related to the Arizona real estate industry and construction activity should be directed to the Arizona Real Estate Center (AREC) in the ASU College of Business. The new AREC phone number is (602) 965-5440.

TABLE 2
KEY SECTOR CONSTRUCTION ACTIVITY
(1985 and 1986)

	SINGLE FAMILY		COMMERCIAL						INDUSTRIAL	
			APARTMENTS[a]		OFFICE BUILDINGS[b]		RETAIL STORES[c]			
Maricopa County	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value	Number of Permits	Dollar Value
1986	23,851	1,706,112,000	1,056	491,174,912	294	249,816,784	1,214	335,460,808	330	145,886,286
1985	23,143	1,572,602,865	1,513	667,325,434	454	384,594,988	985	257,268,922	606	306,126,441
Pima County										
1986	4,526	302,769,632	220	159,300,416	104	59,594,016	121	46,609,344	29	5,900,296
1985	4,160	252,427,164	204	139,417,258	121	104,160,842	80	22,369,581	76	39,209,697
Rest of Arizona										
1986	5,702	314,563,611	113	39,586,752	155	17,893,904	273	41,703,744	109	13,801,048
1985	5,968	282,496,084	209	81,277,421	155	16,247,007	315	29,716,524	124	32,463,710
Arizona Total										
1986	34,079	2,323,465,243	1,389	690,062,080	553	327,304,704	1,608	423,773,896	477	165,187,630
1985	33,271	2,107,526,113	1,926	908,020,013	730	505,002,867	1,380	309,355,027	806	379,899,848

[a] Five or more housing units

[b] Office, bank, medical and professional buildings

[c] Shopping centers and other mercantile buildings

Source: Center for Business Research, College of Business, Arizona State University

TABLE 3
ARIZONA HOUSING UNITS AUTHORIZED: ANNUAL REPORT
January - December 1986

	One Family	Mobile Homes	Duplex	3-4 Family	5 or More	Total
APACHE COUNTY						
Eagar	27	28	0	0	0	55
St. Johns	10	14	0	0	0	24
Springerville	6	0	0	0	0	6
Unincorporated	47	14	0	0	0	61
Total, Apache County	90	56	0	0	0	146
Percent Change, Previous Year	-16	43	–	–	–	-12
COCHISE COUNTY						
Benson	3	23	0	3	0	29
Bisbee	36	30	0	0	24	90
Douglas	13	0	0	12	0	25
Huachuca City	0	0	0	0	0	0
Sierra Vista	92	40	0	24	429	585
Tombstone	1	10	0	0	5	16
Unincorporated	326	258	12	4	6	606
Willcox	8	5	0	0	0	13
Total, Cochise County	479	386	12	43	464	1,364
Percent Change, Previous Year	40	22	–	258	-55	-19
COCONINO COUNTY						
Flagstaff	305	84	34	3	97	523
Fredonia	2	25	0	0	0	27
Page	31	67	0	4	0	102
Unincorporated	380	236	4	0	41	660
Williams	3	3	0	0	0	6
Total, Coconino County	721	414	38	7	138	1,318
Percent Change, Previous Year	0	-6	-17	-22	-73	-23
GILA COUNTY						
Globe	4	0	0	0	0	4
Hayden	0	1	0	0	0	1
Miami	1	0	2	0	0	3
Payson	87	100	2	3	28	220
Unincorporated	207	148	0	0	0	355
Total, Gila County	299	249	4	3	28	583
Percent Change, Previous Year	-1	29	0	-75	-29	5
GRAHAM COUNTY						
Pima	3	11	0	0	0	14
Safford	9	5	0	3	0	17
Thatcher	17	29	0	0	0	46
Unincorporated	21	130	0	0	0	151
Total, Graham County	50	175	0	3	0	228
Percent Change, Previous Year	-31	4	0	-25	0	-6
GREENLEE COUNTY						
Clifton	0	0	0	0	0	0
Duncan	3	0	0	0	0	3
Unincorporated	0	0	0	0	0	0
Total, Greenlee County	3	0	0	0	0	3
Percent Change, Previous Year	50	–	0	0	0	-25
LA PAZ COUNTY						
Parker	39	202	0	0	0	241
Unincorporated	6	32	0	0	0	38
Total, La Paz County	45	234	0	0	0	279
Percent Change, Previous Year	125	75	–	–	–	82
MARICOPA COUNTY						
Avondale	148	77	8	4	14	249
Buckeye	16	40	0	0	80	136
Chandler	2,216	0	0	8	612	2,836
El Mirage	8	89	0	4	16	97
Gila Bend	1	0	0	0	0	1
Gilbert	912	1	238	0	27	1,178
Glendale	2,040	204	4	4	3,271	5,523
Goodyear	0	36	0	0	0	36
Guadalupe	0	0	0	0	0	0
Mesa	3,387	0	48	170	3,659	7,264
Paradise Valley	68	0	0	0	0	68
Peoria	2,183	15	12	0	8	2,218
Phoenix	6,048	29	22	300	6,514	12,913
Scottsdale	1,882	1	6	70	1,370	3,329
Surprise	N/R	N/R	N/R	N/R	N/R	N/R
Tempe	658	0	6	62	1,572	2,498
Tolleson	7	0	0	0	0	7
Unincorporated	4,055	1,133	0	142	332	5,662
Wickenburg	19	0	2	4	0	25
Youngtown	5	0	0	24	44	73
Total, Maricopa County	23,851	1,606	346	792	17,519	44,113
Percent Change, Previous Year	3	-30	-52	-36	-32	-17
MOHAVE COUNTY						
Kingman City	92	86	0	12	144	334
Kingman Area	60	243	0	0	5	308
Lake Havasu City	436	22	10	0	73	541
Lake Havasu Area	7	31	0	0	0	38
Bullhead City	169	205	0	44	48	466
Mohave Valley South	89	300	0	0	0	389
Dolan Springs	28	62	0	0	0	90
Sacramento Valley	43	128	0	0	0	171
Mohave General	25	81	0	0	0	106
Total, Mohave County	929	1,158	10	56	270	2,423
Percent Change, Previous Year	-13	-38	150	-50	45	-25
NAVAJO COUNTY						
Holbrook	6	33	0	0	0	39
Pinetop-Lakeside	37	6	0	0	32	75
Show Low	28	34	0	0	0	62
Snowflake	9	3	2	0	0	14
Taylor	5	0	0	0	0	5
Unincorporated	272	9	0	0	0	281
Winslow	16	19	0	0	0	35
Total, Navajo County	373	104	2	0	32	511
Percent Change, Previous Year	-41	-70	0	–	33	-50
PIMA COUNTY						
Marana	5	34	0	0	0	39
Oro Valley	111	0	0	0	0	111
South Tucson	4	1	0	241	0	246
Tucson	1,113	441	98	43	4,848	6,343
Unincorporated	3,293	1,068	0	0	1,647	6,008
Total, Pima County	4,526	1,544	98	284	6,295	12,747
Percent Change, Previous Year	8	-26	-58	140	16	5
PINAL COUNTY						
Apache Junction	132	370	16	20	56	594
Casa Grande	79	0	10	6	7	102
Coolidge	5	19	0	0	0	24
Eloy	3	31	0	0	0	34
Florence	6	38	0	0	0	44
Kearny	1	12	0	0	0	13
Mammoth	3	0	0	0	0	3
Superior	0	0	0	0	0	0
Unincorporated	304	463	4	10	0	781
Total, Pinal County	533	933	30	36	63	1,595
Percent Change, Previous Year	6	4	-58	-48	-93	-35
SANTA CRUZ COUNTY						
Nogales	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	0	13	0	0	0	13
Unincorporated	118	38	16	4	0	176
Total, Santa Cruz County	118	51	16	4	0	189
Percent Change, Previous Year	22	-68	700	-69	–	-31
YAVAPAI COUNTY						
Chino Valley	N/R	N/R	N/R	N/R	N/R	N/R
Clarkdale	28	29	0	0	56	113
Cottonwood	31	19	22	14	80	166
Jerome	0	0	0	0	0	0
Prescott	266	54	8	8	138	474
Prescott Valley	181	121	14	40	0	356
Unincorporated	999	378	10	53	60	1,500
Total, Yavapai County	1,669	615	54	118	334	2,790
Percent Change, Previous Year	12	-34	-15	-31	48	-3
YUMA COUNTY						
Somerton	13	6	0	0	0	19
Unincorporated	155	475	2	0	0	632
Wellton	0	0	0	0	0	0
Yuma	225	51	4	13	506	799
Total, Yuma County	393	532	6	13	506	1,450
Percent Change, Previous Year	-21	-20	0	-87	-49	-38
TOTAL, ARIZONA	34,079	8,036	616	1,359	25,649	69,739
PERCENT CHANGE, PREVIOUS YEAR	2	-24	-46	-28	-27	-15

N/R: No Report

Note: A dash indicates that a percent change could not be calculated because at least one period had no activity.

Source: Center for Business Research, College of Business, Arizona State University

TABLE 4
ARIZONA BUILDING PERMITS: ANNUAL REPORT
January – December 1986

	Residential*		Commercial		Industrial		Other		Total	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
APACHE COUNTY										
Eagar	72	2,451,395	3	138,600	0	0	7	1,236,870	82	3,826,865
St. Johns	24	N/C	2	N/C	0	0	0	0	26	N/C
Springerville	13	193,900	8	293,000	0	0	10	1,355,092	31	1,841,992
Unincorporated	83	2,726,057	0	0	0	0	16	115,824	99	2,841,881
Total, Apache County	192	5,371,352	13	431,600	0	0	33	2,707,786	238	8,510,738
Percent Change,										
Previous Year	0	0	-23	-33	0	0	64	5,834	3	39
COCHISE COUNTY										
Benson	42	467,556	9	3,458,720	2	7,000	31	2,567,572	84	6,500,848
Bisbee	129	2,664,411	3	885,000	0	0	9	124,416	141	3,673,827
Douglas	166	4,360,324	11	1,190,954	1	255,000	120	417,056	298	6,223,334
Huachuca City	38	115,261	3	90,700	0	0	4	146,720	45	352,681
Sierra Vista	338	6,022,374	34	10,344,667	5	533,880	372	1,304,680	749	18,205,621
Tombstone	56	125,725	13	180,825	0	0	27	31,060	96	337,610
Unincorporated	682	23,528,290	20	1,147,867	3	270,000	104	5,219,762	809	30,165,919
Willcox	48	246,900	2	28,836	4	50,250	50	301,170	104	626,956
Total, Cochise County	1,499	37,530,841	95	17,327,391	15	1,116,130	717	10,112,436	2,326	66,086,798
Percent Change,										
Previous Year	37	63	39	-48	50	-48	-40	-28	-1	-9
COCONINO COUNTY										
Flagstaff	530	26,187,347	59	15,181,691	12	4,976,500	294	22,975,387	895	69,300,925
Fredonia	30	59,000	2	101,200	0	0	9	33,300	41	193,500
Page	133	4,081,987	9	1,198,613	4	401,452	34	351,258	180	6,033,310
Unincorporated	1,122	25,413,941	15	2,248,041	4	91,653	151	6,416,358	1,292	34,169,993
Williams	22	511,506	2	385,495	0	0	43	242,401	67	1,139,402
Total, Coconino County	1,837	56,233,781	87	19,115,040	20	5,469,605	531	30,018,704	2,475	110,837,130
Percent Change,										
Previous Year	0	12	-1	12	53	375	13	92	3	32
GILA COUNTY										
Globe	32	424,035	2	540,000	0	0	27	276,585	61	1,240,620
Hayden	5	5,600	0	0	0	0	11	4,410	16	10,010
Miami	9	65,300	0	0	0	0	2	20,000	11	85,300
Payson	431	8,037,293	15	1,375,736	1	36,880	74	1,075,082	521	10,524,971
Unincorporated	524	12,907,536	23	916,160	5	55,500	45	2,035,852	597	15,915,050
Total, Gila County	1,001	21,439,766	40	2,831,896	6	92,380	159	3,411,929	1,206	27,775,951
Percent Change,										
Previous Year	11	19	21	-10	-53	-81	-3	-6	8	9
GRAHAM COUNTY										
Pima	25	362,900	2	16,000	0	0	14	16,800	41	395,700
Safford	77	976,194	17	440,750	1	2,500	29	3,284,160	124	4,703,604
Thatcher	49	1,812,540	2	66,000	0	0	12	60,600	83	1,939,140
Unincorporated	208	3,087,296	8	211,200	0	0	24	307,619	240	3,606,115
Total, Graham County	379	6,238,930	29	733,950	1	2,500	79	3,669,179	488	10,644,559
Percent Change,										
Previous Year	-13	4	-19	47	-75	-98	-12	24	-14	11
GREENLEE COUNTY										
Clifton	1	4,500	0	0	0	0	0	0	1	4,500
Duncan	11	51,800	0	0	0	0	3	90,300	14	142,100
Unincorporated	3	7,000	0	0	0	0	1	1,000	4	8,000
Total, Greenlee County	15	63,300	0	0	0	0	4	91,300	19	154,600
Percent Change,										
Previous Year	36	-30	0	0	0	0	100	1,013	46	58
LA PAZ COUNTY										
Parker	289	1,496,968	3	159,000	1	1,300	56	221,958	349	1,879,226
Unincorporated	53	753,977	3	98,194	0	0	34	135,869	90	988,040
Total, La Paz County	342	2,250,946	6	257,194	1	1,300	90	357,827	439	2,867,267
Percent Change,										
Previous Year	40	-39	-72	-77	-50	-97	-65	-78	-17	-56
MARICOPA COUNTY										
Avondale	244	9,611,741	13	5,253,258	3	163,040	152	784,729	412	15,792,778
Buckeye	60	753,000	2	1,383,500	0	0	5	2,542,400	67	4,678,900
Chandler	2,660	133,132,262	172	77,859,001	48	18,365,877	3,577	85,321,028	6,457	294,678,168
El Mirage	100	2,022,628	8	1,406,427	0	0	27	253,215	135	3,681,277
Gila Bend	8	58,600	0	0	1	170,000	19	983,001	28	1,211,601
Gilbert	1,106	79,559,721	26	5,962,408	5	3,617,641	595	28,494,713	1,731	117,634,483
Glendale	2,576	132,956,384	381	116,529,908	18	3,586,040	1,577	20,192,193	4,500	273,264,525
Goodyear	59	156,963	1	41,850	1	15,000	99	189,377	160	403,190
Guadalupe	0	0	0	0	0	0	1	1,080	1	1,080
Mesa	3,969	233,115,154	322	217,997,744	30	16,223,759	3,286	117,455,457	7,627	584,792,114
Paradise Valley	244	18,056,457	1	18,000	0	0	278	3,360,488	523	21,444,945
Peoria	2,354	100,094,522	53	12,821,009	12	1,061,570	1,423	9,522,815	3,842	123,469,916
Phoenix	9,037	434,387,907	1,076	589,614,467	115	41,951,006	7,229	216,153,560	17,457	1,282,106,940
Scottsdale	2,242	303,641,367	273	146,151,780	4	1,376,350	1,869	92,844,025	4,388	544,013,512
Surprise	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Tempe	1,263	85,134,100	422	109,748,522	97	44,045,600	1,409	55,800,700	3,191	294,728,922
Tolleson	39	403,645	3	1,099,000	3	11,048,000	21	266,581	66	12,817,226
Unincorporated	7,038	254,601,095	533	50,466,638	3	4,035,610	5,720	27,763,224	13,294	336,866,567
Wickenburg	25	1,002,620	3	387,000	1	27,000	9	366,160	38	1,782,780
Youngtown	12	250,300	141	1,541,000	0	0	18	231,000	171	2,022,300
Total, Maricopa County	33,055	1,788,918,456	3,430	1,338,280,522	339	145,686,493	27,264	642,505,746	64,088	3,915,391,217
Percent Change,										
Previous Year	-1	7	-5	-16	-44	-52	-1	17	-2	-2

Arizona Building Permits: Annual Report (continued)

	Residential*		Commercial		Industrial		Other		Total	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
MOHAVE COUNTY										
Kingman City	262	4,001,784	15	5,650,072	1	25,800	87	808,588	365	10,486,044
Kingman Area	714	7,497,634	10	632,309	1	462,733	310	684,702	1,035	9,277,378
Lake Havasu City	574	24,617,702	27	5,093,972	10	1,230,030	246	1,832,209	857	32,773,913
Lake Havasu Area	79	870,439	6	412,256	0	0	41	105,402	126	1,388,097
Bullhead City	851	17,536,902	35	10,766,990	1	24,500	247	3,591,224	1,134	31,939,616
Mohave Valley South	813	10,515,051	18	2,044,642	0	0	321	1,129,313	1,152	13,689,006
Dolan Springs	197	2,387,035	1	23,328	0	0	79	191,743	277	2,602,106
Sacramento Valley	274	3,747,795	4	61,956	0	0	96	333,951	374	4,143,702
Mohave General	140	1,786,715	3	94,200	1	768	44	186,310	188	2,067,993
Total, Mohave County	3,904	72,961,057	119	24,799,725	14	1,743,831	1,471	8,863,442	5,508	108,387,855
Percent Change, Previous Year	-4	18	-64	3	16	-12	-24	4	-13	13
NAVAJO COUNTY										
Holbrook	57	1,080,000	6	331,000	0	0	4	55,000	67	1,466,000
Pinetop-Lakeside	97	2,444,710	7	1,083,124	0	0	88	396,464	192	3,924,298
Show Low	113	3,081,995	12	429,437	2	190,320	121	800,234	248	4,501,986
Snowflake	29	125,000	3	45,000	0	0	0	0	32	170,000
Taylor	9	224,000	0	0	0	0	2	10,000	11	234,000
Unincorporated	464	13,027,895	9	763,297	5	404,552	99	922,885	577	15,118,629
Winslow	75	1,205,962	4	207,780	0	0	26	111,450	105	1,525,192
Total, Navajo County	844	21,189,562	41	2,859,638	7	894,872	340	2,296,033	1,232	26,940,105
Percent Change, Previous Year	-40	-14	-8	-31	75	262	24	-31	-28	-17
PIMA COUNTY										
Marana	44	131,000	1	30,000	0	0	16	88,700	61	249,700
Oro Valley	119	7,319,538	1	30,000	0	0	103	1,660,066	223	9,009,604
South Tucson	49	551,903	17	4,757,903	1	362,496	45	1,012,862	112	6,685,164
Tucson	3,226	78,895,730	274	224,732,789	3	595,500	4,018	103,244,277	7,521	407,468,296
Unincorporated	5,842	237,475,922	197	83,355,000	25	4,942,300	2,334	67,702,100	8,398	393,475,322
Total, Pima County	9,280	324,374,093	490	312,905,692	29	5,900,296	6,516	173,708,005	16,315	816,888,086
Percent Change, Previous Year	-8	13	-1	1	-61	-84	-2	50	-6	9
PINAL COUNTY										
Apache Junction	599	16,782,974	16	7,094,894	2	212,800	583	3,472,574	1,200	27,563,242
Casa Grande	117	6,478,443	14	1,556,235	0	0	128	4,060,063	259	12,094,741
Coolidge	63	606,627	3	80,947	1	240,000	65	179,865	132	1,087,439
Eloy	42	530,686	4	147,544	3	572,553	26	326,920	75	1,577,703
Florence	117	1,213,293	5	127,000	0	0	43	437,855	165	1,778,148
Kearny	26	85,375	0	0	0	0	10	14,550	36	99,925
Mammoth	6	40,900	0	0	0	0	3	N/C	9	40,900
Superior	8	15,560	0	0	0	0	11	21,679	19	37,239
Unincorporated	967	14,553,456	42	6,545,400	9	290,000	345	2,109,735	1,363	23,498,591
Total, Pinal County	1,945	40,307,314	84	15,532,020	15	1,315,353	1,214	10,623,241	3,256	67,777,928
Percent Change, Previous Year	6	15	-39	-51	-6	-92	-7	-2	-1	-26
SANTA CRUZ COUNTY										
Nogales	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Patagonia	27	157,969	2	1,600	0	0	8	17,580	37	177,149
Unincorporated	182	6,869,354	4	474,500	1	143,000	22	511,069	209	7,997,923
Total, Santa Cruz County	209	7,027,323	6	476,100	1	143,000	30	528,649	246	8,175,072
Percent Change, Previous Year	-23	29	0	0	0	-79	-11	18	-21	15
YAVAPAI COUNTY										
Chino Valley	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Clarkdale	64	2,962,080	3	1,236,960	0	0	43	1,914,888	108	6,015,971
Cottonwood	138	3,126,774	33	4,236,789	9	986,464	99	704,677	239	9,056,204
Jerome	17	N/C	0	0	0	0	0	0	17	N/C
Prescott	550	19,692,053	45	9,274,412	0	0	383	3,653,780	978	32,620,245
Prescott Valley	462	10,898,715	44	2,015,233	1	50,000	27	255,955	534	13,219,903
Unincorporated	1,958	81,020,308	86	6,764,000	5	315,722	638	9,163,564	2,687	97,263,594
Total, Yavapai County	3,189	117,701,430	211	23,527,394	15	1,352,186	1,190	15,692,854	4,565	158,273,884
Percent Change, Previous Year	-9	22	27	-23	-16	-46	13	1	-3	10
YUMA COUNTY										
Somerton	26	600,118	3	397,000	0	0	30	38,502	59	1,035,620
Unincorporated	877	22,958,928	24	1,482,351	13	1,588,406	419	10,023,902	1,333	36,053,587
Welton	8	11,900	1	2,000	0	0	3	5,500	12	19,400
Yuma	445	15,540,250	78	22,799,611	1	181,498	294	6,040,462	818	44,561,821
Total, Yuma County	1,356	39,111,196	106	24,680,962	14	1,769,904	746	16,108,366	2,222	81,670,428
Percent Change, Previous Year	-14	-11	-47	-36	-54	-69	27	38	-7	-18
TOTAL, ARIZONA	59,047	2,540,719,347	4,757	1,783,759,124	477	165,187,890	40,344	920,666,497	104,625	5,410,381,998
PERCENT CHANGE, PREVIOUS YEAR	-2	9	-9	-10	-40	-56	-3	23	-3	0

*Includes mobile homes

N/R: No Report

N/C: Some communities do not collect dollar valuations.

Note: A dash indicates that a percent change could not be calculated because at least one period had no activity.

Source: Center for Business Research, College of Business, Arizona State University

1986 Home Sales Increase Throughout Valley

Home sales were up in 1986 for all of the larger cities in the Phoenix metropolitan area, contributing to a Valleywide 13 percent gain over 1985 figures. Sales skyrocketed 44 to 60 percent in Gilbert, Fountain Hills and Peoria (see Table 1); the latter two cities led the 1985 advance as well. In contrast, the number of homes sold rose less than 5 percent in Phoenix, Glendale and Sun City West; the latter city also trailed in 1985.

During 1986, the number of new single family homes sold declined for the Valley as a whole but jumped 42 percent in Peoria. New townhouse and condominium sales, which rose 7 percent overall, shot up in Peoria and Scottsdale but fell in Phoenix, Tempe and Glendale. The number of existing homes sold increased in all cities, with the exception of single family homes in Sun City West.

Resale single family homes accounted for nearly 70 percent of the homes sold in the Phoenix area during 1986. However, in Sun City West, the number of new single family homes sold exceeded existing home sales in that category; in Peoria, the numbers were nearly equal.

Mesa's new townhouse and condominium sales exceeded the number sold in Phoenix. In all other housing categories, sales in Phoenix greatly outnumbered those in all other cities.

TABLE 1
1986 HOME SALES, MEDIAN SALES PRICE AND PERCENT CHANGE FROM 1985
Metropolitan Phoenix, by City

City	Number of Sales	Percent Change	Median Sales Price[1]	Percent Change
Chandler	4,300	25%	$86.0	4%
Fountain Hills	500	60	93.0	16
Gilbert	250	44	67.5	1
Glendale	3,200	3	77.0	3
Mesa	9,775	17	76.0	6
Paradise Valley	350	19	295.1	17
Peoria	2,550	49	78.0	5
Phoenix	24,850	5	71.8	5
Scottsdale	5,200	24	108.0	7
Sun City	1,700	10	69.0	3
Sun City West	1,150	4	92.9	3
Tempe	3,375	10	77.7	2
MARICOPA CO. TOTAL[2]	63,500	13	78.0	5

[1] In thousands

[2] Total does not add to sum of cities because of exclusion from table of small cities and unincorporated areas.

TABLE 2
1986 MEDIAN SALES VALUES AND PERCENT CHANGES FROM 1985
Resale Single Family Homes Only

City	Median Price Per Square Foot	Percent Change	Median Size (In feet)	Percent Change
Chandler	$57.0	5%	1,460	3%
Fountain Hills	59.1	3	1,720	0
Gilbert	50.2	2	1,360	1
Glendale	50.1	3	1,550	-1
Mesa	53.5	4	1,430	2
Paradise Valley	96.5	3	3,260	7
Peoria	53.3	7	1,340	5
Phoenix	50.7	3	1,400	1
Scottsdale	60.1	4	1,840	4
Sun City	51.9	1	1,470	3
Sun City West	60.2	1	1,680	4
Tempe	53.0	2	1,570	0
MARICOPA CO. TOTAL	52.6	4	1,460	2

Source (Tables 1 and 2): Center for Business Research, College of Business, Arizona State University

HOME PRICES

The median sales price of all homes sold during 1986 rose between 3 and 7 percent in most cities, near the metro area figure of 5 percent. However, prices rose only 1 percent in Gilbert and 2 percent in Tempe. In contrast, 16 to 17 percent gains were realized in Paradise Valley and Fountain Hills, but the median price had fallen 5 percent during 1985 in Fountain Hills. Cities with relatively few sales, especially those with more expensive housing, can experience wide yearly swings in median sales prices.

In Paradise Valley and Scottsdale, the 1986 median sales price exceeded $100,000; it was lowest in Gilbert at $67,500. Homes sold in Fountain Hills and Sun City West also were priced well above the Valley median of $78,000. The median sales price is a function of the size of homes sold and the price per square foot (see Table 2).

Resale single family homes sold in Paradise Valley were much larger and much more expensive per square foot than in any other Valley city. Also above average on both measures were homes sold in Scottsdale, Fountain Hills and Sun City West. Homes in Gilbert and Glendale sold for the lowest price per square foot. The smallest homes sold were in Peoria and Gilbert.

The median price per square foot of resale single family homes sold during 1986 advanced less than the median sales price because of a small increase in home size. Variation among cities in 1986 percent change was not large for either median size or median price per square foot.

– **Tom R. Rex**
Research Manager

Metro Phoenix Activity Expected To Decline Slightly

Metropolitan Phoenix real estate activity during 1987 is expected to be slightly below 1986 levels. This outlook represents the consensus of four real estate groups in Maricopa County: homebuilders, financial services (banks, savings and loan associations, and mortgage bankers), real estate brokerages (commercial and residential), and "other" entities (appraisal, development, title insurance and property management firms, and government). They were surveyed during December 1986 and January 1987 by *Phoenix Metro* magazine and the Arizona Real Estate Center.

ECONOMIC OUTLOOK

Respondents believe economic conditions will be weaker in 1987 than in 1986. The expectation of economic downturn is more prevalent in the 1987 survey than in 1986 (Table 1). Generally, 51 percent foresee improvement in the local economy; however, they anticipate a worse performance nationally – only 30 percent are confident that the federal government's economic policy will lead to an improving economy.

Projections of specific indicators are illustrated in Table 2. Respondents expect the same increase in the Phoenix inflation rate; only 26 percent are confident that inflation will decline in 1987. They also believe that Phoenix unemployment will increase over the low 1986 level and that interest rates will remain largely unchanged during 1987. The greatest variance concerns the apartment vacancy rate, with forecasts ranging from 3 percent to 25 percent.

REAL ESTATE OUTLOOK

In keeping with the forecast for a slight economic downturn, the 1987 outlook is for the local real estate market to be fairly comparable to the 1986 market. Only 44 percent of the respondents are confident that the real estate market will improve. They expressed a similar level of confidence in the new home market. The fundamental concern is that only 40 percent of the respondents expect mortgage interest rates to decline in 1987.

They believe other measures of real estate activity will be similar in 1987 to 1986 and foresee little or no increase in home prices (Table 2). After a very strong year in 1986, respondents expect the resale market to remain unchanged. They also predict single family permits in the 20,000 to 24,999 range for 1987, identical to the 1986 survey forecast. While opinions differ greatly on the vacancy rate for apartments, nearly 70 percent foresee rents increasing approximately 4 percent.

As in several past surveys, more than 70 percent of the respondents are confident that their business activity will improve in 1987, and they expect a median gain of 7 percent.

SUMMARY

Respondents to the 1987 survey are not as optimistic as their 1986 counterparts. They basically foresee a weaker showing for 1987. However, given the relatively high level of market activity in 1986, the expectations of somewhat lower levels in 1987 are tantamount to forecasting another fairly good year for the Arizona real estate industry.

– Jay Q. Butler

Dr. Butler is Associate Professor of Real Estate and Director of the Arizona Real Estate Center in the ASU College of Business.

TABLE 1
REAL ESTATE INDUSTRY SURVEY: ECONOMIC OUTLOOK SCORES*

Economic Variable	1987	1986
Consumer confidence	44	57
Phoenix area economy	51	65
Retail sales	47	58
National economy	32	49
Phoenix employment	45	58
National employment	32	46
Business confidence	43	54

* Metropolitan Phoenix real estate industry representatives had three reply options to each survey question: Higher, Same or Lower. The score for each question was calculated by averaging the weighted replies. The weights: Higher - 100; Same - 50; Lower - 0. Scores may range from 0 to 100, with higher scores reflecting a greater degree of optimism. Scores near 50 indicate an expectation of no change; scores above 50 indicate expected improvement, and scores below 50 indicate expected worsening.

Source: Survey conducted by the Arizona Real Estate Center in the College of Business, Arizona State University; in cosponsorship with *Phoenix Metro* magazine, December 1986 and January 1987.

TABLE 2
REAL ESTATE INDUSTRY SURVEY
1987 CONSENSUS OUTLOOK COMPARED TO ACTUAL 1986
Metropolitan Phoenix

		Percentage Rate	
Variable	*1986 Projection*	*Actual Year-end, 1986*	*1987 Projection*
Conventional mortgage rate	11.5	9.2	9.5
FHA mortgage rate	11.0	9.0	9.0
Prime interest rate	9.0	7.5	7.5
Commercial interest rate	12.0	N/A	10.0
Six-month Treasury Bill rate	8.0	5.4	6.0
Inflation rate (Metropolitan Phoenix)	4.0	1.3	3.0
Apartment vacancy rate	11.0	11.0	12.0
Unemployment rate (Metropolitan Phoenix)	6.0	5.4	7.0
		Percent Change	
	1986 Projection	*Actual 1986*	*1987 Projection*
Resale home prices	2.0	2.4	0.0
New home prices	5.0	4.2	3.0
Land prices	8.0	N/A	5.0
Level of firm's activity	10.0	N/A	7.0
Resale home market activity	0.0	14.0	0.0
Monthly rent for apartments	3.0	2.7	3.0

N/A = Not Available

Source: Center for Business Research and Arizona Real Estate Center, College of Business, Arizona State University